

LEPIDOPTERA HETEROCERA  
IN  
THE BRITISH MUSEUM  

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PART VII.



















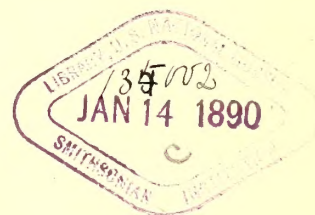




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ILLUSTRATIONS  
OF  
TYPICAL SPECIMENS  
OF  
LEPIDOPTERA HETEROCERA  
IN  
THE COLLECTION  
OF  
THE <sup>✓</sup>BRITISH MUSEUM. *(Nat. hist.) Dept of Zool.*

PART VII.—BY ARTHUR GARDINER BUTLER.



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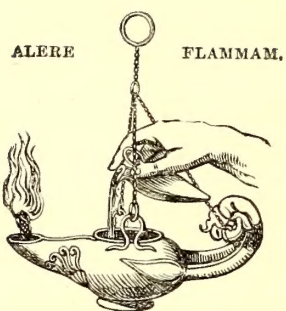
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## P R E F A C E.

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THE present part of the 'Illustrations' contains an account of a collection of Macro-Lepidoptera Heterocera made in the district of Kangra by the Rev. J. H. Hocking in the years 1877-79, chiefly at Dharmsala.

Mr. Hocking has kindly supplied me with the following particulars as regards the district and localities where he collected the insects:—"The Kangra district extends from the Ravee to the Sutlej, and comprises 8000 square miles of country. In addition to Kangra proper, extending from Hooshiarpur to Bygnath on the Mundi boundary, the district includes Kúlú, a valley at the foot of the Rotang Pass, where the Blue Beas, one of the five rivers of the Punjab, takes its rise and spends its infancy and youth, and has in its immediate neighbourhood, and under the District Officers, the important and picturesque States of Mundi, Suchet, Chumba, Goleir, Lumbagiraon, &c. Dharmsala is the Headquarter Station of the District Officers, and is 6200 feet above the level of the sea; Kangra Fort standing some 2300 feet in the valley, which slopes gradually from Puthankote, on the plains of the Punjab, to Palampore, where the elevation is 4000 feet. The district extends to the boundaries of British Thibet at the head of the Kúlú valley, and its highest mountains reach to 18,000 feet, those in Lahore (just over the boundary) rising to 21,000 feet."

The number of species amounts to upwards of 780, and many of them were reared from larvæ, of which a very instructive series was prepared by Mr. Hocking by inflation and is in an admirable state of preservation.

As the collection is evidently sufficiently complete to give a good idea of the composition of the Lepidopterous Fauna of this district, it seemed useful not to limit this part of the



'Illustrations' to the description of the types of the new species, but to add a nominal list of all the species contained in the collection.

It was at first intended that Mr. F. Moore should undertake the examination of this collection; but as his other engagements would have delayed the publication for some years, this work devolved upon Mr. Butler. However, Mr. Moore had examined and named some of the specimens some time previously and published diagnoses in the 'Proceedings of the Zoological Society,' 1888, pp. 390-412. In some instances there are discrepancies between that paper and the present work as regards the localities at which certain species were obtained. The localities are given here on the authority of Mr. Hocking, who has been kind enough to look over the proof-sheets.

With reference to the characteristics of the Lepidopterous Fauna of Kangra, Mr. Butler states that, "with the light thrown upon certain forms by the series of variations secured by Mr. Hocking, it has been found impossible to keep some of these forms distinct from those of Europe and Japan; the Lepidoptera of these countries are, indeed, more numerously represented at Dharmasala than in any other part of India which has been equally well explored."

ALBERT GÜNTHER,  
*Keeper of the Department of Zoology.*

*British Museum, N. H., January 22, 1889.*



ILLUSTRATIONS  
OF  
TYPE SPECIMENS  
OF  
LEPIDOPTERA HETEROCERA.

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SYSTEMATIC LIST

OF  
SPECIES COLLECTED BY THE REV. J. H. HOCKING, CHIEFLY AT DHARMSALA AND KANGRA.

[When not otherwise stated, Dharmsala is the locality of the species.]

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SPHINGIDÆ.

**HEMARIS**, *Dalm.*

*saundersii*, *Walk.*

Kúlú.

*fuciformis*, *Linn.*

*simillima*, *Moore.*

Kangra.

**CEPHONODES**, *Hüb.*

*hylas*, *Linn.*

**MACROGLOSSA**, *Scop.*

*stellatarum*, *Linn.*

Kúlú.

*belis*, *Cram.*

*bombylans*, *Bdv.*

Kangra.

**RHOPALOPSYCHE**, *Butl.*

*nycteris*, *Koll.*

**CHÆROCAMPA**, *Dup.*

*macromera*, *Butl.*

*thyelia*, *Linn.*

*alecto*, *Linn.*

*celerio*, *Linn.*

*oldenlandiæ*, *Fab.*

**AMPELOPHAGA**, *Brem.*

*fasciosa*, *Moore.*

p. 25, Pl. CXXI. f. 3.

**DAPHNIS**, *Hüb.*

*nerii*, *Linn.*

Cashmere.



**DEILEPHILA**, *Ochs.*livornica, *Leach.*

Kúlú.

**ACOSMERYX**, *Bdv.*naga, *Moore.*

Kúlú.

**DILUDIA**, *Grote.*abietina, *Bdv.*

Kangra.

melanomera, *Butl.*

Kangra.

**PROTOPARCE**, *Burm.*orientalis, *Butl.***NEPHELE**, *Hüb.*morpheus, *Fab.***ACHERONTIA**, *Hüb.*styx, *Westw.*

Kúlú.

morta, *Hüb.***LANGIA**, *Moore.*zenzeroides, *Moore.***TRIPTOGON**, *Brem.*dyras, *Walk.*albicans, *Butl.*

Kangra.

**POLYPTYCHUS**, *Hüb.*trilineatus, *Moore.* p. 25, Pl. CXXI. f. 4.**CLANIS**, *Hüb.*exusta, *Butl.*

Kangra.

**AMBULYX**, *Schactl.*placida, *Moore.* p. 25, Pl. CXXI. f. 1.rubiginosa (as *Dahira*), *Moore* \*.rubescens, *Butl.* p. 26, Pl. CXXI. f. 2.

Mundi.

## COSSIDÆ.

**COSSUS**, *Fab.*leuconotus, *Walk.*

Kangra.

**ZENZERA**, *Latr.*multistrigata, *Moore.*

## PSYCHIDÆ.

**BARANDRA**, *Moore.*fumata, *Moore.***DASARATHA**, *Moore.*himalayana, *Moore* †.**MAHASENA**, *Moore.*hockingii, *Moore.* p. 27, Pl. CXXI. f. 5.

Succoor, Kangra Valley.

## AGARISTIDÆ.

**MIMEUSEMIA**, *Butl.*peshwa, *Moore.***ÆGOCERA**, *Latr.*venulia, *Cram.*

## CHALCOSIIDÆ.

**CHALCOSIA**, *Hüb.*idæoides, *H.-Sch.*albata, *Moore.***SORITIA**, *Walk.*leptalina, *Koll.*var. *pulchella*, *Koll.***CAMPYLOTES**, *Westw.*histrionicus, *Hope.***GYNAUTOCERA**, *Guér.*papilionaria, *Guér.*

Kangra.

fraterna, *Moore.*

p. 27, Pl. CXXI. f. 7.

Calcutta.

\* This species was labelled "*Dahira rubescens*," and consequently was figured as *Ambulyx rubescens*: the reason for the change of name does not appear in Mr. Moore's description.

† The types of Moore's genera *Barandra* and *Dasaratha* are in such very poor condition and so distorted, that it is impossible to figure them.



- BORADIA**, *Moore*.  
*carneola*, *Moore*. p. 27, Pl. CXXI. f. 8.  
*Kangra*.
- AGALOPE**, *Walk*.  
*basalis*, *Walk*.
- ANOMÆOTES**, *Feld*.  
*basalis* (as *Akesina*), *Moore*.  
p. 28, Pl. CXXI. f. 9.
- TRYPANOPHORA**, *Koll*.  
*semihyalina*, *Koll*.  
*Kangra*.
- ZYGÆNIDÆ**.
- ZYGÆNA**, *Fab*.  
*kaschmirensis*, *Koll*.
- SYNTOMIS**, *Ochs*.  
*bicineta*, *Koll*.  
*Kangra*.  
*liberta*, *Walk*.  
*Kangra*.  
*cyssea*, *Cram*.  
*Kangra*.
- ERESSA**, *Walk*.  
*confinis*, *Walk*.  
*Kúlú*.
- TASEMA**, *Walk*.  
*bipars*, *Walk*.
- ARTONA**, *Butl*.  
*fulvida*, *Butl*.  
*Kangra*.  
*zebraica*, *Butl*.  
*Kangra*.  
*quadrinaculata*, *Moore*.
- PROCRIS**, *Fab*.  
*stipata*, *Walk*.
- ARCTIIDÆ**.
- ALPENUS**, *Walk*.  
*multiguttatus*, *Walk*.  
*larva*. p. 120, Pl. CXXXVIII. f. 9.
- ANDALA**, *Moore*.  
*unifascia*, *Walk*.  
*Kangra*.  
*larva*. p. 120, Pl. CXXXVIII. f. 11.
- DIPHTERA**, *Ochs*.  
*fasciata*, *Moore*. p. 30, Pl. CXXII. f. 1.  
*Laka*.
- PLATAPLECTA**, *Butl*.  
*soluta*, *Walk*.
- RHODOGASTRIA**, *Hüb*.  
*sanguinolenta*, *Drury*.
- SPILARCTIA**, *Butl*.  
*lacteata*, *Butl*. (larva only).  
p. 121, Pl. CXXXVIII. f. 2.  
*dalbergæ*, *Moore*. p. 28, Pl. CXXII. f. 2.  
*howqua*, *Moore*. p. 28, Pl. CXXII. f. 3.  
*esigneta*, *Koll*.
- THYRGORINA**, *Moore*.  
*dorsalis*, *Moore*. p. 29, Pl. CXXII. ff. 4, 5.  
*larva*. p. 121, Pl. CXXXVIII. f. 4.
- SEIRARCTIA**, *Pack*.  
*quadriramosa*, *Koll*.  
*larva*. p. 121, Pl. CXXXVIII. f. 1.
- PHISSAMA**, *Moore*.  
*transiens*, *Walk*.  
*vacillans*, *Walk*.
- LACHANA**, *Moore*.  
*ladakensis*, *Moore*. p. 30, Pl. CXXI. f. 6.  
*Ladak*.
- RAJENDRA**, *Moore*.  
*pannosa*, *Moore*.  
*larva*. p. 121, Pl. CXXXVIII. f. 8.  
*tripartita*, *Walk*, var. ?
- ALOPE**, *Walk*.  
*ricini*, *Fab*.  
*Kangra*.



**MELANAREAS**, *Butl.*

*imperialis*, *Koll.*  
Kangra.

**HYPERCOMPA**, *Hüb.*

*plagiata*, *Walk.*  
*principalis*, *Koll.*  
larva. p. 122, Pl. CXXXVIII. f. 3.

## LITHOSIIDÆ.

**DIGAMA**, *Moore.*

*hearseyana*, *Moore* \*.

**ARGINA**, *Walk.*

*argus*, *Koll.* (from Capt. Reed's coll.).

**MILTOCHRISTA**, *Hüb.*

*pretiosa*, *Moore.* p. 31, Pl. CXXII. f. 6.  
*congerens*, *Feld.*  
Kangra.  
*excurrrens*, *Walk.*  
Kangra.  
*linga*, *Moore.*  
Kangra.  
*palmata*, *Moore.*  
Kangra.

**DEIOPEIA**, *Steph.*

*pulchella*, *Linn.*  
Kangra.

**BIZONE**, *Walk.*

*puella*, *Drury.*  
*guttifera*, *Walk.*  
Kúlú.  
*adita*, *Moore.*  
*gazella*, *Moore.*

**DOLICHE**, *Walk.*

*gelida*, *Walk.*  
Kangra.

**CYANA**, *Walk.*

*detrita*, *Walk.*

**SETINOCHROA**, *Feld.*

*infumata*, *Feld.*

**SETINA**, *Schr.*

*dharma*, *Moore.*  
*dasara*, *Moore.* p. 32, Pl. CXXII. ff. 7, 8.  
Kúlú.

**CHALLA**, *Moore.*

*quadrinaculata*, *Moore.*  
p. 32, Pl. CXXII. f. 9.  
*calamaria*, *Moore* (*Setina*).  
Palampore.

**ÆMENE**, *Walk.*

*subcinerca*, *Moore.*  
Kúlú.  
*inconstans*, *Moore.* p. 33, Pl. CXXII. f. 11.  
*sagittifera*, *Moore.* p. 33, Pl. CXXII. f. 12.

**CALLINOLA**, *Butl.*

*scripta*, *Moore* (*Ræselia*).  
p. 34, Pl. CXXII. f. 13.

**LEBENA**, *Walk.*

*angulata*, *Moore* (*Ræselia*).  
p. 34, Pl. CXXII. f. 14.  
*fraterna*, *Moore* (*Ræselia*).

**CAPISSA**, *Moore.*

*pallens*, *Moore.*  
*vagesa*, *Moore.*

**KATHA**, *Moore.*

*nigrifrons*, *Moore.*

**COSSA**, *Walk.*

*pallida*, *Moore.*

**CHRYSORABDIA**, *Butl.*

*bivitta*, *Walk.*

**SIMAREEA**, *Moore.*

*lurida*, *Butl.* p. 34, Pl. CXXII. f. 10.

\* Mr. Moore had distinguished the examples of this species by two different names, some being smaller and darker than others; as, however, these specimens have not been characterized in his recent paper, it seems probable that he has since seen reason to estimate them at their true value.



## HYPSIDÆ.

**LACIDES**, *Walk.**ficus*, *Fab.*

Kangra.

**DAMALIS**, *Hüb.**plaginota*, *Butl.***TRIPURA**, *Moore.**prasena*, *Moore.*

## CALLIDULIDÆ.

**PTERODECTA**, *Butl.**anchora*, *Pagens*.\*

## LIPARIDÆ.

**HIMALA**, *Moore.**argentea*, *Walk.* (Capt. Reed's coll.).**GAZALINA**, *Walk.**chrysolopha*, *Koll.***EUPROCTIS**, *Hüb.**antica*, *Walk.**abdominalis*, *Moore.*

Kúlú.

p. 35, Pl. CXXIII. ff. 4, 5.

*lunata*, *Walk.* (Capt. Reed's coll.).**PORTHESIA**, *Steph.**xanthorrhæa*, *Koll.*

Kangra.

**CHÆROTRICHA**, *Feld.**sulphurescens*, *Moore.*

p. 35, Pl. CXXIII. ff. 6, 7.

Kangra Valley, 4000 ft.

*vitellina*, *Koll.*

larva.

p. 122, Pl. CXXXVIII. f. 13.

*plana*, *Walk.*

larva.

p. 122, Pl. CXXXVIII. f. 5.

Kangra.

**ARTAXA**, *Walk.**pusilla*, *Moore.*

Kangra.

*guttata*, *Walk.*

Palampore.

*scintillans*, *Walk.**justicie*, *Moore.*

larva.

p. 123, Pl. CXXXVIII. f. 10.

**PANTANA**, *Walk.**circumdata*, *Walk.***TRISULOIDES**, *Butl.**sericea*, *Butl.**cærulea*, *Butl.*

p. 35, Pl. CXXVIII. f. 3.

**CHARNIDAS**, *Walk.**litura*, *Walk.*

Kúlú.

*umbrina*, *Moore.*

p. 36, Pl. CXXIII. f. 8.

Kúlú.

*exclamationis*, *Koll.*

larva.

p. 123, Pl. CXXXVIII. f. 6.

**PARORGYIA**, *Pack.**dalbergiæ*, *Moore.*

p. 37, Pl. CXXIII. ff. 9-11.

larva.

p. 123, Pl. CXXXVIII. f. 12.

Kangra Valley.

**PORTHETRIA**, *Hüb.**aryama*, *Moore.*

Kangra.

*obfuscata*, *Walk.*

Kúlú.

**LYMANTRIA**, *Hüb.**concolor*, *Walk.**carnecolor*, *Moore.**superans*, *Walk.**nigra*, *Moore.*

p. 37, Pl. CXXIII. ff. 2, 3.

Kangra.

*mathura*, *Moore.*

\* Named by Mr. Moore about 25 years ago, but only described in his recent paper on Mr. Hocking's Lepidoptera, too late to secure priority.



**DASYCHIRA**, *Steph.*kausalia, *Moore.*

larva. p. 124, Pl. CXXXVIII. f. 7.

Kangra.

**LASIOCAMPIDÆ.****EUPTEROTE**, *Hüb.*fraterna, *Moore.* p. 38, Pl. CXXIII. f. 1.**SANGATISSA**, *Moore.*triseriata, *Butl.*

Kangra.

**GANISA**, *Walk.*plana, *Walk.***LEBEDA**, *Walk.*nobilis, *Walk.***ODONESTIS**, *Germ.*læta, *Walk.*

Kangra.

**TRABALA**, *Walk.*sulphurea, *Koll.***ESTIGENA**, *Moore.*nandina, *Moore.***GASTROPACHA**, *Ochs.*undulifera, *Walk.***TARAGAMA**, *Moore.*castanoptera, *Moore.* p. 38, Pl. CXXIV. f. 1.

Kangra.

**BHIMA**, *Moore.*undulosa, *Walk.***VARMINA**, *Moore.*indica, *Walk.***SATURNIIDÆ.****ANTHERÆA**, *Hüb.*sivalica, *Hutt.*

Kangra.

nebulosa, *Hutt.*

Kangra.

♀ var. *fraterna*, *Moore.*

Kangra.

roylei, *Moore.***CALIGULA**, *Moore.*simla, *Westw.*assama, *Westw.*

Kangra.

**ACTIAS**, *Leach.*selene, *Hüb.*

Kangra.

**SATURNIA**, *Schr.*hockingii, *Moore.* p. 39, Pl. CXXIV. ff. 2, 3.

Kúlú.

**PHILOSAMIA**, *Grote.*canningii, *Hutt.*

Kangra.

**LIMACODIDÆ.****EURABILA**, *Butl.*lignea, *Butl.*

p. 40, Pl. CXXXVIII. f. 6.

**PARASA**, *Walk.*pastoralis, *Butl.*lepida, *Cram.*

Kangra.

hockingii, *Moore.* p. 40, Pl. CXXIV. f. 4.

Kangra.

**APHENDALA**, *Walk.*fasciata, *Moore.* p. 41, Pl. CXXIV. f. 6.transversata, *Walk.*var. *tripartita*, *Moore* \*.nararia, *Moore* (*Parasa*).conspersa, *Butl.*quadrinotata, *Moore* (*Miresa*).

Kúlú.

\* Some of Mr. Hocking's examples are intermediate between the two forms.



**CANIA**, *Walk.**bilinea*, *Walk.**suffusa*, *Moore* (*Miresa*).

p. 41, Pl. CXXIV. f. 5.

## BOMBYCIDÆ.

**BOMBYX**, *Schr.**huttonii*, *Westw.***ERNOLATIA**, *Walk.**lactea*, *Hutt.***TRILOCHA**, *Moore.**albicollis*, *Walk.*

## DREPANULIDÆ.

**DREPANA**, *Schr.**lilacina*, *Moore.*

p. 41, Pl. CXXIV. f. 8.

*simillima*, *Moore.*

p. 42, Pl. CXXIV. f. 9.

**AGNIDRA**, *Moore.**violacea*, *Butl.*

p. 42, Pl. CXXIV. f. 7.

**PERIDREPANA**, *Butl.**hyalina*, *Moore* (*Drepana*).

Kúlú.

p. 43, Pl. CXXV. f. 1.

**AUZATA**, *Walk.**semipavonaria*, *Walk.*

Kúlú.

**MACRAUZATA**, *Butl.**specularis*, *Moore.*

Kangra.

**MACROCILIX**, *Butl.**mysticata*, *Walk.***PROBLEPSIS**, *Hub.**delphiaria*, *Guén.*

Kangra.

*vulgaris*, *Butl.*

p. 43, Pl. CXXV. f. 2.

Kangra.

*apollinaria*, *Guén.*

Kúlú.

## CERURIDÆ.

**MOMA**, *Hüb.**champa*, *Moore.***DICRANURA**, *Latr.**himalayana*, *Moore* (*Cerura*).

p. 44, Pl. CXXV. f. 3.

## NYCTEOLIDÆ.

**EARIAS**, *Hüb.**frondosana*, *Walk.*

Kúlú.

*chromataria*, *Walk.**fervida*, *Walk.*

Kúlú.

*marginata*, *Walk.*

## NOTODONTIDÆ.

**STAUROPUS**, *Germ.**berberisæ*, *Moore.*

p. 44, Pl. CXXV. f. 4.

**PERIDEA**, *Steph.**basistriga*, *Moore* (*Heterocampa*).

p. 45, Pl. CXXV. ff. 5, 6.

**TRIÆNA**, *Hüb.**denticulata*, *Moore.*

p. 45, Pl. CXXV. f. 8.

*maxima*, *Moore.*

Kúlú.

**HYBOMA**, *Hüb.**divisa*, *Moore.*

p. 45, Pl. CXXV. f. 7.

*umbrifera*, *Butl.*

p. 46, Pl. CXXVI. f. 1.

**EUSCOTIA**, *Butl.**inextricata*, *Moore.***CALLÆNIA**, *Hüb.**albescens*, *Moore.*

Kúlú.

**PHEOSIA**, *Hüb.**fasciata*, *Moore.*

p. 47, Pl. CXXV. ff. 9, 10.

**ICHTHYURA**, *Hüb.**fulgurita*, *Walk.*

**CALPE**, *Treit.**rectistria*, *Guén.***HYPOCALPE**, *Butl.**fasciata*, *Moore.*

Kangra.

**ORÆSIA**, *Guén.**emarginata*, *Fab.*var. *tentans*, *Walk.*♂ *alliciens*, *Walk.*

Kangra.

**ROSAMA**, *Walk.**plusioides*, *Moore.*

Kangra.

**INGURA**, *Guén.**recurrens*, *Walk.**subapicalis*, *Walk.*

## CYMATOPHORIDÆ.

**HABROSYNE**, *Hüb.**fraterna*, *Moore.*

p. 47, Pl. CXXV. f. 11.

**THYATIRA**, *Hüb.**batis*, var. *cognata*, *Moore.*

p. 48, Pl. CXXV. f. 12.

**POLYPLOCA**, *Hüb.**orbicularis*, *Moore* (Palimpsestis).

p. 48, Pl. CXXVI. f. 2.

*albidisca*, *Warr.*

p. 49, Pl. CXXVI. f. 3.

*renalis*, *Moore* (Palimpsestis).

p. 49, Pl. CXXVI. f. 4.

**BRYOPHILA**, *Treit.**literata*, *Moore.*

## LEUCANIIDÆ.

**ALETIA**, *Hüb.**exanthemata*, *Moore.*

p. 50, Pl. CXXVI. f. 6.

*rudis*, *Moore.*

p. 50, Pl. CXXVI. ff. 7, 8.

*fraterna*, *Moore.*

p. 50, Pl. CXXVI. f. 9.

*albicosta*, *Moore.***LEUCANIA**, *Hüb.**l-album*, *Gmel.* \**rufistrigosa*, *Moore.*var. *rufescens*, *Moore.**nareda*, *Feld.**sinuosa*, *Moore.**nigrolineosa*, *Moore.**duplicata*, *Butl.**prominens*, *Moore* (nec *Walk.*) †.*venalba*, *Moore.**percisa*, *Moore.*

p. 51, Pl. CXXVI. ff. 10, 11.

*bifasciata*, *Moore.*

p. 51, Pl. CXXVI. f. 13.

*commoides*, *Guén.**griseifascia*, *Moore.**irrorata*, *Moore.*

p. 51, Pl. CXXVI. f. 12.

*loreyi*, *Dup.**collecta*, *Walk.**unipuncta*, *Haw.**extranea*, *Guén.***RHIZOGRAMMA**, *Led.* ‡.*indica*, *Walk.***TYMPANISTES**, *Moore.**rubidorsalis*, *Moore.*

p. 52, Pl. CXXVI. f. 5.

\* Mr. Warren has very rightly sunk *L. penicillata* and *bistrigata* of Moore as synonyms of this species; with a good series of both European and Indian examples none of the supposed distinctive characters prove to be constant; the Indian specimens appear to be frequently darker on both surfaces than those from Europe.

† Exactly like *L. nigrolineosa*, excepting that it is much redder in colouring.

‡ Barely separable from *Leucania* (*R. inextricata* is not a *Rhizogramma*).



## XYLOPHASIIDÆ.

**AXYLIA**, *Hüb.**putris*, *Fab.**triseriata*, *Moore.**renalis*, *Moore.**fasciata*, *Moore.*var. *irrorata*, *Moore.*

Kúlú.

**XYLOPHASIA**, *Steph.**repetita*, *Butl.* p. 52, Pl. CXXVII. ff. 1, 2.*sodalis*, *Butl.***SPODOPTERA**, *Guén.**nubes*, *Guén.* \***LAPHYGMA**, *Guén.**exigua*, *Guén.***PRODENIA**, *Guén.**retina*, *Guén.**ciligera*, *Guén.**glaucistriga*, *Walk.***CHIRIPHA**, *Walk.**involuta*, *Walk.*

Kúlú.

**NEURIA**, *Guén.**auripicta*, *Butl.* p. 53, Pl. CXXVII. f. 3.

## APAMEIDÆ.

**MAMESTRA**, *Ochs.**brassicæ*, *Linn.**siderifera*, *Moore* (*Hadena*).*terranea*, *Butl.* p. 53, Pl. CXXVII. f. 10.*niveiplaga*, *Walk.* (*Hadena*).

Kúlú.

**APAMEA**, *Ochs.**undicilia*, *Walk.***APAMEA.***consanguis*, *Walk.* (*Hadena*).*latifasciata*, *Moore.**indistans*, *Guén.* (*Hadena*).*oculea*, *Linn.***PERIGEA**,*centralis*, *Walk.* †*galaxia*, *Butl.***BERRESA**, *Walk.**natalis*, *Walk.***RADINACRA**, *Butl.**lineosa*, *Moore.***CARADRINA**,*kadenii*, *Frey.**farinacea*, *Moore.**himalayica*, *Koll.**arenacea*, *Moore.**fragilis*, *Butl.* (*Spælotis*).*externa*, *Walk.* (*Orthosia*).**AMYNA**, *Guén.**selenampha*, *Guén.***ILATTIA**, *Walk.**renalis*, *Moore.**cephusalis*, *Walk.*var. *flavigutta*, *Walk.* (*Celæna*).*inornata*, *Walk.* (*Miana*).*stellata*, *Butl.* (*Miana*).var. *apicalis*, *Moore.*

## NOCTUIDÆ.

**AGROTIS**, *Ochs.**suffusa*, *Gmel.**intracta*, *Walk.**costigera*, *Moore.*

\* Described by Walker as *Prodenia infecta*, *insignata*, *venustula*, and *permunda*; *Laphygma squalida*; *Celæna bisignata*; *Agrotis transducta* and *bisignata*; and *Hadena obliqua*.

† Subsequently described by Walker as *Celæna serva*; *Perigea inexacta*, *canorufa*, and *illecta*; *Caradrina conducta*; *Hadena leonina* and *pauperata*.

**AGROTIS.**

segetum, *Schiff*\*.  
 aversa, *Walk.*  
 certificata, *Walk.*  
 repulsa, *Walk.*  
 corticea, *Schiff*.  
 fraterna, *Moore.*  
 biconica, *Koll.*  
 exigua, *Koll.*  
 spiculifera, *Guén.*  
 aristifera, *Guén.*  
 Kangra.

**TIRACOLA, Moore.**

violacea, *Butl.* p. 54, Pl. CXXVII. f. 5.

**SPÆLOTIS, Bdv.**

ambigua, *Butl.* p. 54, Pl. CXXVIII. ff. 10, 11.

**CHERSOTIS, Bdv.**

quadrisigna, *Moore.*  
 nivisparsa, *Butl.*  
 p. 54, Pl. CXXVII. f. 11.

**OPIGENA, Bdv.**

Species near *O. arenosa* (rubbed).

**TRIPHÆNOPSIS, Butl.**

inepta, *Butl.* p. 55, Pl. CXXVII. ff. 6, 7.  
 diminuta, *Butl.* p. 55, Pl. CXXVII. ff. 8, 9.

**TRIPHÆNA, Ochs.**

pronuba, *Linn.*  
 fuscicollis, *Butl.*  
 p. 56, Pl. CXXVII. f. 4.  
 semiherbida, *Walk.*

**GRAPHIPHORA, Ochs.**

c-nigrum, *Linn.*  
 subdolens, *Butl.*

**GRAPHIPHORA.**

canescens, *Butl.*  
 rubicilia, *Moore.*  
 basistriga, *Moore.*  
 cerastioides ♀?, *Moore*†.

**OCHROPLEURA, Hüb.**

consanguinea, *Moore.*  
 triangularis, *Moore.*  
 flammatra, *Gmel.*

**ORTHOSIIDÆ.****SEMIOPHORA, Steph.**

ochracea, *Walk.* (Oxira)‡.  
 orthosioides, *Butl.* p. 56, Pl. CXXVIII. f. 1.  
 - Mundi.

**ANCHOCELIS, Guén.**

tenuis, *Butl.* p. 57, Pl. CXXVII. f. 12.  
 Laka.

**ORTHODES, Guén.**

divisa, *Moore* (Ipimorpha).

**XANTHIA, Ochs.**

sp.? (much worn).  
 Kúlú.

**XESTIA, Hüb.**

melonina, *Butl.* p. 57, Pl. CXXVIII. f. 7.

**COSMIIDÆ.****COSMIA, Ochs.**

albipennis, *Butl.* p. 58, Pl. CXXVII. f. 13.

**HADENIDÆ.****DIANTHÆCIA, Bdv.**

auroviridis, *Moore* (Hadena).  
 nivescens, *Butl.* p. 58, Pl. CXXVIII. f. 2.

\* *A. injuncta* and *turbulenta* are probably dark females of this species.

† The single example obtained corresponds with the male on the upper surface, but the line across the secondaries on the under surface is nearer to the middle of the wing.

‡ This is one of the most variable of the *Noctuities*; so much so that Mr. Hocking had separated his specimens under eight different numbers.



**BAMRA**, *Moore*.

*mundata*, *Walk.* (*Agrotis*).  
Kangra.

**EPUNDA**, *Dup.*

*mamestrina*, *Butl.* p. 59, Pl. CXXVIII. f. 5.  
*bicolor*, *Moore* (*Acronycta*).

**CANNA**, *Walk.*

*splendens*, *Moore*. p. 59, Pl. CXXVIII. f. 4.

**RAPHIA**, *Hüb.*

*viminalis*, *Fab.*

**EUPLEXIA**, *Steph.*

*cuprea*, *Moore*.  
*pectinata*, *Warr.*

**HADENA**, *Schr.*

*lubrica*, *Butl.* p. 60, Pl. CXXVIII. f. 9.

**KARANA**, *Moore*.

*similis*, *Moore*. p. 60, Pl. CXXVIII. f. 8.

**EUROIS**, *Hüb.*

*auriplena*, *Walk.*  
*virens*, *Butl.*

## XYLINIDÆ.

**AUCHMIS**, *Hüb.*

*sikkimensis*, *Moore*.

## HELIOTHIDÆ.

**HELIOTHIS**, *Ochs.*

*armigera*, *Hüb.*  
*marginata*, *Kléem.*  
*scutosa*, *Schiff.*  
Kúlú.

## ACONTIIDÆ.

**XANTHODES**, *Guén.*

*intersepta*, *Guén.*  
Kangra.  
*transversa*, *Guén.*  
Kangra.

**XANTHODES**.

*stramen*, *Guén.*  
Kúlú.

**ACONTIA**, *Ochs.*

*solaris*, *Schiff.*  
Kúlú.  
*inda*, *Feld.*  
*bipunctata*, *Walk.*  
*vialis*, *Moore*.  
*meridionalis*, *Walk.*  
*maculosa*, *Walk.*  
*plebeia*, *Butl.* p. 61, Pl. CXXIX. f. 3.  
*plumbata*, *Butl.* p. 61, Pl. CXXIX. f. 4.  
*nivosa*, *Swinh.*  
*signifera*, *Walk.*  
*excisa*, *Butl.* p. 61, Pl. CXXIX. ff. 5, 6.  
*picata*, *Butl.* p. 62, Pl. CXXIX. f. 2.  
*tegulata*, *Butl.* p. 63, Pl. CXXIX. f. 1.  
*quadripartita*, *Walk.*  
*imbuta*, *Walk.* (*Erastria*).  
*acerba*, *Feld.*

**BANKIA**, *Guén.*

*obliqua*, *Moore*. p. 63, Pl. CXXIX. f. 7.  
*renalis*, *Moore*.

## ERASTRIIDÆ.

**ERASTRIA**, *Ochs.*

*unduligera*, *Butl.* p. 63, Pl. CXXIX. f. 9.

## ANTHOPHILIDÆ.

**HYDRELIA**, *Guén.*

*auripalpis*, *Butl.* p. 64, Pl. CXXIX. f. 8.  
*opalescens*, *Butl.* p. 64, Pl. CXXIX. f. 10.

**LEPTOSIA**, *Guén.*

*contingens*, *Moore* (*Metachrostis*).  
p. 65, Pl. CXXIX. f. 13.

**THALPOCHARES**, *Led.*

*argentifrons*, *Butl.* p. 65, Pl. CXXX. f. 1.  
*hypenoides*, *Butl.* p. 65, Pl. CXXX. f. 2.  
*roseana*, *Moore*. p. 66, Pl. CXXX. f. 3.

**ANTHOPHILA**,

*trilatalis*, *Walk.* (*Pyrallis*).  
p. 66, Pl. CXXIX. f. 11.

**NARANGA**, *Moore*.ferruginea, *Moore*.diffusa, *Walk.* (*Xanthopteryx*).**MASALIA**, *Moore*.tosta, *Moore*. p. 67, Pl. CXXX. f. 7.  
Kúlú.**PRADATTA**, *Moore*.bimaculata, *Moore*. p. 67, Pl. CXXXIX. f. 12.beatrice, *Moore*. p. 67, Pl. CXXX. f. 6.artaxoides, *Moore*. p. 68, Pl. CXXX. f. 8.  
Kúlú.decorata, *Moore*. p. 68, Pl. CXXX. f. 11.**CURUBASA**, *Moore*.cruentata, *Moore*. p. 68, Pl. CXXX. f. 9.**HICCODA**, *Moore*.dosaroides, *Moore*. p. 69, Pl. CXXX. f. 10.**OZARBA**, *Walk.*incondita, *Butl.* p. 69, Pl. CXXX. f. 13.punctigera, *Walk.*venata, *Butl.* p. 70, Pl. CXXX. f. 12.

## ERIOPIIDÆ.

**METHORASA**, *Moore*.latreillei, *Dup.***CALLOPISTRIA**, *Hüb.*minuta, *Butl.* p. 70, Pl. CXXX. f. 4.yerburii, *Butl.*repleta, *Walk.*rivularis, *Walk.*

## EURHIPIDÆ.

**EUTELIA**, *Hüb.*inextricata, *Moore*.**EUTELIA**.excitans, *Butl.*flavillatrix, *Walk.***PENICILLARIA**, *Guén.*maculata, *Butl.* p. 71, Pl. CXXX. f. 5.

## PLUSIIDÆ.

**ABROSTOLA**, *Ochs.*transfixa, *Walk.***PLUSIA**, *Ochs.*orichalcea, *Fab.*ornatissima, *Walk.*verticillata, *Guén.*pyropia, *Butl.*albostriata, *Walk.*purissima, var., *Butl.\**

Kúlú.

nigrisigna, *Walk.*ni, *Hüb.*extrahens, *Walk.*ciliaris, *Walk.*

Kúlú.

fureifera, *Walk.*hebetata, *Butl.* p. 71, Pl. CXXXI. f. 1.**PLUSIODONTA**, *Guén.*auripicta, *Moore*.

## GONOPTERIDÆ.

**COSMOPHILA**, *Bdv.*xanthindyma, *Bdv.*

Kúlú.

**ANOMIS**, *Hüb.*figlina, *Butl.* p. 71, Pl. CXXXI. f. 2.cervina?, var. instabilis, *Butl.*

p. 72, Pl. CXXXI. f. 3.

ocellata, *Butl.* p. 72, Pl. CXXXI. f. 4.

\* Only differs from the type in the variable character of the undivided condition of the gamma-like marking.



**GONITIS**, *Guén.\***fulvida*, *Guén.**combinans*, *Walk.**mesogona*, *Walk.*

Dharmasala and Kúlú.

*involuta*, *Walk.*

Kúlú.

*subulifera*, *Guén.***AMPHIPYRIDÆ.****AMPHIPYRA**, *Ochs.**magna*, *Walk.**monolitha*, *Guén.***DINUMMA**, *Walk.**bipunctata*, *Motsch.**deponens*, *Walk.**largetavi*, *Oberth.* (*Amphipyra*).*varians*, *Butl.* p. 73, Pl. CXXXI. ff. 9, 10.**CALLYNA**, *Guén.**siderea*, *Guén.**jugaria*, *Walk.*

Kúlú.

**ELIOCHROEA**, *Walk.**opulenta*, *Moore* (*Epilecta*).

p. 73, Pl. CXXXI. ff. 5, 6.

*curtipalpis*, *Butl.* p. 74, Pl. CXXXI. ff. 7, 8.**TOXOCAMPIDÆ.****APOPESTES**, *Hüb.**spectrum*, *Esp.***TOXOCAMPA**, *Guén.**viciae*, *Hüb.**orientalis*, *Butl.**cucullata*, *Moore.***PLECOPTERA**, *Guén.**reflexa*, *Guén.***POLYDESMIDÆ.****PANDESMA**, *Guén.**quenavadi*, *Guén.*

Kangra.

*sublimis*, var., *Feld.**lepida*, *Moore* (*Agriopis*).**GIRPA**, *Walk.**sobria*, *Walk.* † (*Ericeia*).**HOMOPTERIDÆ.****ALAMIS**, *Guén.**umbrina*, *Guén.*var. *albicincta*, *Guén.***HOMOPTERA**, *Bdv.**dispila*, *Walk.***PANILLA**, *Moore.**apicalis*, *Butl.* p. 74, Pl. CXXXII. f. 1.**CATEPHIIDÆ.****COCYTODES**, *Guén.**modesta*, *Guén.***CATEPHIA**, *Ochs.**flavescens*, *Butl.* p. 74, Pl. CXXXI. f. 12.**ANOPHIA**, *Guén.**acronyctoides*, var., *Guén.***ERYGIA**, *Guén.**usta*, *Guén.**sigillata*, *Butl.* p. 75, Pl. CXXXI. f. 11.

\* A single example of apparently a new genus allied to *Gonitis* was with Mr. Hocking's examples of *G. mesogona*; the specimen is, however, somewhat stunted in growth, and may prove to be only a distorted sport of the species.

† Also characterized as *Girpa optativa*, *G. comitata*, *Remigia compressa*, *R. congregata*, *R. pertentens*, and *R. optatura*. *G. comitata* is a yellowish form of the female, which is extremely variable; the male also varies not a little.

**LOPHOPTERA**, Guén.*costata*, Moore.**ODONTODES**, Guén.*aleuca*, Guén.\**inordinata*, Walk.var. *bolinoides*, Walk.*subfasciata*, Walk.var. *ferruginea*, Walk.**STEIRIA**, Walk.*chalybea*, Butl.

## HYPOCALIDÆ.

**HYPOCALA**, Guén.*puera*, Cram.*subsatura*, Guén.var. *aspersa*, Butl.var. *limbata*, Butl. p. 76, Pl. CXXXI. f. 13.*deflorata*, Fab.

## CATOCALIDÆ.

**CATOCALA**, Ochs.*afghana*, Swinh.*inconstans*, Butl. p. 76, Pl. CXXXII. ff. 2, 3.*dotata*, Walk.*distorta*, Butl. p. 77, Pl. CXXXII. f. 4.

Kúlú.

## OPHIDERIDÆ.

**OPHIDERES**, Bdv.*fullonica*, Linn.*tyrannus*, Guén.*salaminia*, Cram.**POTAMOPHORA**, Guén.*manlia*, Cram.

## EREBIDÆ.

**SYPNA**, Guén.*dubitaria*, Walk.*punctosa*, Walk.**SYPNA**.*ocularis*, Moore.*constellata*, Moore.*obscurata*, Butl.*saturata*, Moore.*pannosa*, Moore.

Dharmasala and Kúlú.

*kirbyi*, var., Butl.

Kúlú.

*rubrifascia*, Moore.*curvilinea*, Moore.*cyanivitta*, Moore.var. *brunnea*, Moore.**ANISONEURA**, Guén.*hypocyana*, Guén.

## OMMATOPHORIDÆ.

**SPEIREDONIA**, Hüb.*substruens*, Walk. (Tavia).**PATULA**, Guén.*macrops*, Linn.**NYCTIPAO**, Hüb.*exterior*, Walk.var. *obliterans*, Walk.*albicincta*, Koll.*glaucopis*, Walk.*crepuscularis*, Linn.

## HYPOPYRIDÆ.

**SPIRAMA**, Guén.*retorta*, Linn.*confusa*, Butl.

p. 78, Pl. CXXXII. ff. 6-8.

*rosacea*, Butl.

p. 78, Pl. CXXXII. ff. 9, 10.

*triloba*, Walk.**HYPOPYRA**, Guén.*shiva*, Guén.*extricans*, Walk.*vespertilio*, Fab.*feniseca*, Guén.

\* Seven forms of this extremely variable species were separately numbered as distinct.



**ENTOMOGRAMMA**, *Guén.**fautrix*, *Guén.**Kangra.***BENDIDÆ.****HULODES**, *Guén.**drylla*, *Guén.\****OPHIUSIDÆ.****LAGOPTERA**, *Guén.**magica*, *Hüb.**elegans*, *Hoev.*var. *juno*, *Dalm.**dotata*, *Fab.***OPHIODES**, *Guén.**tirhæa*, *Cram.†*var. *hottentota*, *Guén.**separans*, *Walk.**triphænoïdes*, *Walk.**cuprea*, *Moore.***ACHÆA**, *Hüb.**melicerte*, *Drury.**combinans*, *Walk.***CALESIA**, *Guén.**dasypterus*, *Koll.**leucostigma*, *Koll.***DYSGONIA**, *Hüb.**albivitta*, *Guén.**olympia*, *Swinh.**latifascia*, *Warr.**crameri*, *Moore.**arctotænia*, *Guén.***DYSGONIA.***analis*, *Guén.**Kangra.***GRAMMODES**, *Guén.**stolida*, *Guén.**Kúlú.**mygdon*, *Cram.**Kúlú.***FODINA**, *Guén.**pallula*, *Guén.**Kangra.***EUCLIDIIDÆ.****TRIGONODES**, *Guén.**hyppasia*, *Cram.*var. *compar*, *Walk.**Kangra.**cuneigera*, *Butl.*

p. 79, Pl. CXXXII. f. 5.

*Kangra.***EUCLIDIA**, *Ochs.**captata*, *Butl.*

p. 79, Pl. CXXXIII. f. 1.

*Kangra.***REMIGIIDÆ.****REMIGIA**, *Guén.**archesia*, *Cram.‡**discios*, *Koll.**frugalis*, *Fab.***AMPHIGONIIDÆ.****EPISPARIS**, *Walk.*varialis, *Walk.***PSIMADA**?, *Walk.**cineracea*, *Butl.*

\* Unrecognized by Walker, and consequently confounded with *H. saturnioides* and *H. restorans*, the latter being a combination of both species.

† The European *O. vesta* is very close to, but may be distinct from this. The description of *O. hottentota* was taken from a faded specimen.

‡ Very variable; described as *R. pellita*, *mutuata*, *jugalis*, *associata*, *inconcisa*, *diffundens*, *bifasciata*, and *demonstrans*. *R. mayeri* is probably a male of the same, and *R. gregalis* may be an extreme variety.

**LACERA**, *Guén.*capella, *Guén.*var. *procellosa*, *Butl.\**

## THERMESIIDÆ.

**SELENIS**, *Guén.*divisa, *Walk.*lauta, *Butl.***MAGULABA**, *Walk.*mæstalis, *Walk.*diminutiva, *Walk.* (Homoptera).**RAPARNA**, *Moore.*undulata, *Moore.* p. 80, Pl. CXXXIII. f. 2.usta, *Butl.* p. 80, Pl. CXXXIII. f. 3.**CAPNODES**, *Guén.*trifasciatus, *Moore.*cremata, *Butl.***DAXATA**, *Walk.*glauescens, *Butl.* p. 81, Pl. CXXXIII. f. 4.lilacina, *Butl.* p. 81, Pl. CXXXIII. f. 5.**GATHYNIA**, *Walk.*simulans, *Butl.* p. 81, Pl. CXXXIII. ff. 6, 7.  
Kangra.**EROSIA**, *Guén.*bicaudata, *Moore.*

Kangra.

ruptaria, *Moore.***ORUDIZA**, *Walk.*columbaris, *Butl.* p. 82, Pl. CXXXIII. f. 8.**DIRADES**, *Walk.*theclata, *Guén.*

## HYPENIDÆ.

**DICHROMIA**, *Guén.*orosia, *Cram.*sextalis, *Walk.*trigonalis, *Guén.***RHYNCHINA**, *Guén.*pionealis, *Guén.*plusioides, *Butl.* p. 82, Pl. CXXXIII. f. 9.sagittata, *Butl.* p. 83, Pl. CXXXIII. ff. 10, 11.cærulescens, *Butl.* p. 83, Pl. CXXXIII. f. 12.angulifascia, *Moore.*cramboides, *Butl.* (Hormisa).morosa, *Butl.* (Hormisa).striga, *Feld.* (Thalpochares).uniformis, *Butl.* p. 84, Pl. CXXXIII. f. 13.rivuligera, *Butl.* p. 84, Pl. CXXXIII. f. 14.angustata, *Butl.* p. 84, Pl. CXXXIII. f. 15.**HYPENA**, *Schr.*indicalis, *Guén.*indicatalis, *Walk.*semiclusalis, *Walk.*abducalis, *Walk.*undulalis, *Walk.*vigens, *Butl.*crassipalpis, *Butl.* p. 85, Pl. CXXXIII. f. 16.veronica, *Butl.* p. 85, Pl. CXXXIII. f. 17.curviferalis, *Walk.*narratalis, *Walk.*symethusalis ?, var., *Walk.*læsalis, var., *Walk.*biplagiata, *Butl.* p. 86, Pl. CXXXIV. f. 1.urticicola, *Butl.* p. 86, Pl. CXXXIV. f. 2.longipennis, *Walk.***BOMOLOCHA**, *Hüb.*obductalis, *Walk.***HYPENODES**, *Doubl.*altivolans ?, *Butl.†*

\* The Dharmasala form corresponds with that of Japan; when compared with a good series it appears to be hardly specifically distinct.

† Two much-worn specimens, either of this or a nearly allied species.



## HERMINIIDÆ.

**BYTURNA**, *Moore*.eucullata, *Moore*.digramma, *Walk*.**RIVULA**, *Guén*.biatomea, *Moore*.**EPIZEUXIS**, *Hüb*.discisigna, *Moore*.saccharivora, *Butl.* p. 87, Pl. CXXXIV. f. 7.maculifera, *Butl.* p. 87, Pl. CXXXIV. f. 8.**PSEUDAGLOSSA**, *Grote*.fulvipicta, *Butl.* p. 87, Pl. CXXXIV. f. 5.atrata, *Butl.* p. 88, Pl. CXXXIV. f. 6.**APPHADANA**, *Walk*.

sp. ? (worn).

**CHUSARIS**, *Walk*.punctilinealis, *Walk*.**AGINNA**, *Walk*.robustalis, *Guén*.

Kúlú.

niphona, *Butl*.**HERMINIA**, *Latr*.innocens, *Butl*.palumbina, *Butl.* p. 88, Pl. CXXXIV. f. 9.**MESOPLECTRA**, *Butl*.lilacina, ♀, *Butl*.**HYDRILLODES**, *Guén*.lentalis, *Guén*.uliginosalis, *Walk*.cleobisalis, *Walk*. (*Gizama*).**BLEPTINA**, *Guén*.dubia, *Butl.* p. 89, Pl. CXXXIV. f. 4.**NODARIA**, *Guén*.externalis, *Guén*.æsoptusalis, *Walk*. (*Bocana*).**EGNASIA**, *Walk*.cinerea, *Butl.* p. 89, Pl. CXXXV. f. 1.**RHÆSENA**, *Walk*.transcissa, *Walk*.**DRAGANA**, *Walk*.pansalis, *Walk*.

## EPIPASCHIIDÆ.

**CENODOMUS**, *Wlsm*.hockingii, *Wlsm*.

Kangra.

**BELONEPHOLIS**, *Butl*.striata, *Butl.* p. 90, Pl. CXXXIV. f. 3.

## PYRALIDÆ.

**TAMRACA**, *Moore*.torridalis, *Led*.**STEMMATOPHORA**, *Guén*.subustalis, *Led*.**AGLOSSA**, *Latr*.pinguinalis, *Led*.**PYRALIS**, *Linn*.marmorea, *Butl.* p. 91, Pl. CXXXIV. f. 10.fumipennis, *Butl.* p. 91, Pl. CXXXIV. f. 11.princeps, *Butl.* p. 91, Pl. CXXXIV. f. 12.platymitris, *Butl*.mauritialis, *Guén*.

Dharmsala and Kúlú.

lucillalis, *Walk*.**EUCLITA**, *Hüb*.incongrua, *Butl*.dharmsalæ, *Butl.* p. 92, Pl. CXXXIV. f. 13.fortis, *Butl.* p. 92, Pl. CXXXIV. f. 14.

Kúlú.

## HERCYNIDÆ.

**HERBULA**, *Guén*.cespitalis, *Schiff*.

## ENNYCHIIDÆ.

**HELIOTHELA**, *Guén.*silhetalis, *Guén.* (Pyrasta).pangialis, *Feld.* (*Botys*).pusilla, *Butl.* p. 93, Pl. CXXXIV. f. 15.**PORPHYRITIS**, *Hüb.*maculata, *Butl.* p. 93, Pl. CXXXIV. f. 16.

## ASOPIIDÆ.

**DANAGA**, *Moore.*picata, *Butl.* p. 94, Pl. CXXXIV. f. 17.biformis, *Butl.* p. 94, Pl. CXXXV. ff. 2, 3.**CINDAPHIA**, *Led.*tricolor, *Butl.* p. 95, Pl. CXXXIV. f. 18.**CHNAURA**, *Led.*octavialis, *Walk.***SAMEA**, *Guén.*yerburii, *Butl.***DIPLOTYLA**, *Meyr.*longipalpis, *Butl.* p. 95, Pl. CXXXV. f. 4.**THYSANODESMA**, *Butl.*major, *Butl.* p. 96, Pl. CXXXV. f. 5.costisignalis, *Moore.***SALBIA**, *Guén.*perspicualis, *Walk.*

Kúlú.

**GADESSA**, *Moore.*ossea, *Butl.* p. 96, Pl. CXXXV. f. 6.**HEDYLEPTA**, *Led.*falsidicalis, *Walk.*vulgalis, *Guén.*abruptalis, *Walk.***PACHYZANCLA**, *Meyr.*stultalis, *Walk.***AGATHODES**, *Guén.*diversalis, *Walk.*ostentalis, *Gey.***LEUCINODES**, *Guén.*sigulalis?, *Guén.*

Kúlú.

**HYMENIA**, *Hüb.*fascialis, *Cram.***PTERYGISUS**, *Butl.*fædalis, *Guén.*

Kúlú.

## STENIIDÆ.

**DIASEMIA**, *Hüb.*geometralis, *Guén.*accalis, *Walk.* (*Scopula*).**RHIMPHALEA**, *Led.*ommatalis?, *Snell.*

## HYDROCAMPIDÆ.

**PARAPONYX**, *Hüb.*linealis, *Guén.***OLIGOSTIGMA**, *Guén.*hamalis, *Snell.*locuples, *Butl.* p. 97, Pl. CXXXV. f. 7.dives, *Butl.* p. 97, Pl. CXXXV. f. 8.**CYMORIZA**, *Guén.*ustalis, *Walk.***CATACLYSTA**, *Hüb.*blandialis, *Walk.*peribocalis, *Walk.*sabrina, *Pryer.*var.? dominalis, *Walk.***TALANGA**, *Moore.*sexpunctata, *Moore.***HYDROCAMPA**, *Latr.*depunctalis, *Guén.***SYNCLERA**, *Led.*multilinealis, *Guén.*



**PYCNARMON**, *Led.**jaguaralis*, *Guén.**virgatalis*, *Moore.***STEGOTHYRIS**, *Led.**transversalis*, *Led.*

Palampore.

**PHALANGIODES**, *Guén.**neptis*, *Cram.***HARITALA**, *Moore.**obrinusalis*, *Walk.**aurolinealis*, *Walk.**definita*, *Butl.* p. 97, Pl. CXXXV. f. 9.

## MARGARODIDÆ.

**GLYPHODES**, *Guén.**pyloalis*, *Walk.**erithealis*, *Walk.* (*Desmia*).**HETEROCNEPHES**, *Led.**venosa*, *Butl.* p. 98, Pl. CXXXV. f. 10.**COPTOBASIS**, *Led.**æmealis*, *Walk.**quadrimaculalis*, *Koll.**concatenalis*, *Walk.* (*Botys*).*tropicalis*, *Walk.***MARGARONIA**, *Hüb.**transvisalis*, *Walk.***PYGOSPILA**, *Guén.**tyres*, *Cram.***EUGLYPHIS**, *Hüb.**procopia*, *Cram.***MARUCA**, *Walk.**aquatilis*, *Bdv.* (*Hydrocampa*).

## BOTIDIDÆ.

**HAPALIA**, *Moore.**indistans*, *Moore.**bipunctalis*, *Warr.**lutealis*, *Dup.**lupulina*, *Clerck.**signatalis*, *Walk.**butyrina*, *Meyr.**strenualis*, *Walk.**ochrealis*, *Moore* (*Pyralis*).**BOTYODES**, *Guén.**asialis*, *Guén.***COTOCHENA**, *Moore.**histricalis*, *Walk.* (*Botys*).**PACHYZANCLA**, *Meyr.**stultalis*, *Walk.* (*Botys*).**CADARENA**, *Moore.**patulalis*, *Walk.* (*Botys*).**ÆTHALOESSA**, *Led.**ilusalis*, *Walk.* (*Botys*).*fervidalis*, *Led.***ACHARANA**, *Moore.**otreusalis*, *Walk.* (*Botys*)\*.**OMPHISA**, *Moore.**monecusalis*, *Walk.* (*Botys*).**PIONEA**, *Guén.**forficulis*, *Linn.***SPILODES**, *Guén.**anaxialis*, *Walk.* (*Botys*).**SCOPULA**, *Schr.**martialis*, *Guén.*var. *testacea*, *Butl.**bisignata*, *Butl.* p. 98, Pl. CXXXV. f. 11.\* Also described as *B. triarealis*, *neloalis*, *abstrusalis*, *pharaxalis*, and *immundalis* by the same author.

**SCOPARIA**, *Haw.*•truncicolella?, *Staint.***ÆGERIIDÆ.****MELITTIA**, *Hüb.*kulluana, *Moore.* p. 98, Pl. CXXXV. f. 12.  
Kúlú.**URAPTERYGIDÆ.****URAPTERYX**, *Leach.*yerburii, *Butl.*  
excellens, *Butl.* p. 99, Pl. CXXXV. f. 13.  
Cashmere.**THINOPTERYX**, *Butl.*crocopterata, *Guén.*  
nebulosa, *Butl.***ENNOMIDÆ.****PSYRA**, *Walk.*spurecataria, *Walk.* (Hyperythra).  
angulifera, *Walk.* (Scotosia).  
cuneata, *Walk.***TETRACIS**?, *Guén.*indica, *Butl.* p. 99, Pl. CXXXV. f. 16.**NIHONISSA**, *Butl.*lentiginosaria, *Moore* (Crocallis).  
similaria, *Moore* (Crocallis).  
Dharmasala and Kúlú.  
bivittaria, *Moore* (Crocallis).**LAGYRA**, *Walk.*decipiens, *Walk.*  
humiferata, *Walk.*  
apicatus, *Moore* (Auzea).**PSEUDOMIZA**, *Butl.*argillacea, *Butl.* p. 100, Pl. CXXXV. f. 15.  
cruentaria, *Moore* (Cimicodes).**CORYMICA**, *Walk.*vitrigera, *Butl.* p. 101, Pl. CXXXV. f. 14.**OMIZA**, *Walk.*patularia, *Walk.***CAUSTOLOMA**, *Led.*ennomosaria, *Walk.***OPISTHOGRAPTIS**, *Hüb.*mimulina, *Butl.* (Rumia).  
ablunata, *Guén.* (Rumia).  
pangiaria, *Feld.***PYRINIA**, *Hüb.*phœnicotæniata, *Koll.*  
falconaria, *Walk.* (Aspilates).**HYPERYTHRA**, *Guén.*lutea, *Cram.\**  
var. *flavata*?, *Fab.†*  
ennomaria, *Guén.*  
*susceptaria*, *Walk.* (Aspilates).**HYPEPHYRA**, *Butl.*terrosa, *Butl.* p. 101, Pl. CXXXV. f. 17.**CABERODES**, *Guén.*achromaria, *Guén.***ABACISCUS**, *Butl.*tristis, *Butl.* p. 102, Pl. CXXXV. f. 18.**AMPHIDASYIDÆ.****AMPHIDASYS**, *Treit.*cognataria, *Guén.‡*  
regalis, *Moore.*  
Dulchee Pass, 6500 feet, Kangra district.  
porphyria, *Butl.* p. 102, Pl. CXXXVI. f. 1.  
Kangra.\* Represented by the *H. limbolaria* and *penicillaria* of Guénée.

† Smaller; primaries with shorter costal margin; wings yellower and with better defined markings

‡ Hitherto only known from N. America.



## BOARMIIDÆ.

**HEMEROPHILA**, *Steph.*subplagiata, *Walk.*senilis, *Butl.***CHORODNA**, *Walk.*metaphæaria, *Walk.***LYCAUGES**, *Butl.*lactea?, *Butl.***CLEORA**, *Curt.*venustularia, *Walk.*semialba, *Moore* (*Pseudocoremia*).ochrifasciata, *Moore.***ALCIS**, *Hüb.*trikotaria, *Feld.\** (*Boarmia*).var. *iterata*, *Butl.*var. *nudipennis*, *Warr.*sublimis, *Butl.* p. 103, Pl. CXXXV. f. 19.

Dharmasala and Trioon.

ferrolavata, *Walk.***BOARMIA**, *Treit.*promptaria, *Walk.*sublavaria, *Guén.*albidaria, *Walk.*comparataria, *Walk.*alienaria, *Walk.*gelidaria, *Walk.*illustraria, *Walk.***TEPHROSIA**, *Bdv.*susceptaria, *Walk.***CHOGADA**, *Moore.*latipennis, *Butl.* p. 103, Pl. CXXXVI. f. 2.**HYPOCHROMA**, *Guén.*pseudoterpsaria, *Guén.*muscioloraria, *Walk.*basiflavata, *Moore.***OPHTHALMODES**, *Guén.*diurnaria, *Guén.***BUZURA**, *Walk.*multipunctaria, *Walk.***XANDRAMES**, *Moore.*dholaria, *Moore.***GNOPHOS**, *Treit.*obtectaria, *Walk.*pilicostata, *Walk.* (*Scotosia*).perlita, *Butl.*vitrecta, *Moore.*dispunctata, *Walk.***PSEUDOCOREMIA**, *Butl.*quadrifera, *Walk.*

## GEOMETRIDÆ.

**TANAORHINUS**, *Butl.*dimissus, *Walk.*confuciararia, *Walk.***LOXOCHILA**, *Butl.*mutans, *Butl.*variegata, *Butl.* p. 104, Pl. CXXXVI. f. 3.**NEMORIA**, *Hüb.*carnifrons, *Butl.*gracilis, *Butl.* p. 104, Pl. CXXXVI. f. 4.gelida, *Butl.* p. 104, Pl. CXXXVI. f. 5.**OMPHAX**?, *Guén.*marina, *Butl.* (*Thalassodes*)†.**THALASSODES**, *Guén.*unduligera, *Butl.* p. 105, Pl. CXXXVI. f. 6.

Kúlú.

glaucaria, *Walk.*quadraria, *Guén.*dissita, *Walk.* (*Geometra*).

\* With Mr. Hocking's series it is impossible to regard *A. iterata*, *pleniferata*, and *nudipennis* as more than varieties.

† Differs from *Thalassodes* in the simple antennæ of the male.

**COMIBÆNA**, *Hüb.*

- quadrinotata, *Butl.* p. 105, Pl. CXXXVI. f. 7.  
 inductaria, *Guén.* (*Phorodesma*).

**RACHEOSPILA**, *Guén.*

- strix, *Butl.* p. 105, Pl. CXXXVI. f. 8.  
 nympa, *Butl.*

**AGATHIA**, *Guén.*

- lycænaria, *Walk.*  
 hilarata, *Guén.*

**THETIDEA**, *Bdv.*

- radiata, *Walk.*  
 Kúlú.

**CHLORORITHRA**, *Butl.*

- fea, *Butl.* p. 106, Pl. CXXXVI. f. 9.

**PALYADIDÆ.****EUMELEA**, *Dunc.*

- florinata, *Guén.*

**SCARDAMIA**, *Walk.*

- metallaria, *Walk.*

**CYCLOPHORIDÆ.****CYCLOPHORA**, *Steph.*

- ærata, *Moore* (*Acidalia*).  
 Kúlú.  
 var. *grata*, *Butl.* (*Ephya*).  
 Kúlú.  
 invexata, *Walk.* (*Epione*).  
*monochromata*, *Walk.*  
*cleoraria*, *Walk.* (*Acidalia*).  
*dharmasælæ*, *Butl.*  
 Kúlú.

**ANISODES**, *Guén.*

- pluristriaria, *Walk.*  
*similaria*, *Walk.*  
*moorei*, *Butl.*  
*similaria*, *Moore* (*nec Walk.*).  
*annulifera*, *Butl.* p. 107, Pl. CXXXVI. f. 10.

**IDÆIDÆ.****EOIS**, *Hüb.*

- lacteipennis, *Butl.* p. 107, Pl. CXXXVI. f. 11.  
 protensa, *Butl.* p. 107, Pl. CXXXVI. f. 12.

**HYRIA**, *Steph.*

- bicolorata, *Moore.*

**PSEUDASTHENA**, *Butl.*

- cinerea, *Butl.* p. 108, Pl. CXXXVI. f. 13.

**IDÆA**, *Treit.*

- plurilinearia, *Moore.*  
 strigilata, *Schiff.*  
 marginepunctata, *Goeze.*  
 beckeraria, *Led.*  
 sylvestraria, *Dup.*  
 cœnosaria, *Led.*  
 attentata, *Walk.*  
 cerussina, *Butl.* p. 108, Pl. CXXXVI. f. 14.  
 lacernigera, *Butl.* p. 109, Pl. CXXXVI. f. 15.  
 holosericeata, *Dup.*  
 insuavis, *Butl.* p. 109, Pl. CXXXVI. f. 16.

**CRASPEDIA**, *Hüb.*

- insolata, *Butl.* p. 109, Pl. CXXXVI. f. 17.  
 ornata, *Scop.*

**TIMANDRA**, *Dup.*

- convectaria, *Walk.*

**RHODOSTROPHIA**, *Hüb.*

- stigmatica, *Butl.* p. 110, Pl. CXXXVI. ff. 19, 20.  
 tristigalis, *Butl.* p. 110, Pl. CXXXVII. f. 1.  
 rara, *Butl.* p. 111, Pl. CXXXVII. f. 2.  
 herbicolens, *Butl.* (*Phyletis*).  
 inconspicua, *Butl.* (*Phyletis*).

**MICRONIIDÆ.****MICRONIA**, *Guén.*

- aculeata, *Guén.*

**CABERIDÆ.****STEGANIA**, *Guén.*

- subtessellata, *Walk.* (*Macaria*).

**HYDATA**, *Walk.*amplipennis, *Butl.* p. 111, Pl. CXXXVI. f. 18.**CABERA**, *Treit.*margarita, *Moore.*

## MACARIIDÆ.

**ELICRINIA**, *Hüb.*signigera, *Butl.* p. 112, Pl. CXXXVII. f. 3.  
Kúlú.**BITHIA**, *Walk.*contigaria, *Walk.* (*Acidalia*).**GUBARIA**, *Moore.*eleonora, *Cram.***MACARIA**, *Curt.*cacavena, *Walk.*sp. near *maligna* (broken).**GONODELA**, *Bdv.*myandaria, *Walk.*♀ *fuscomarginata*, *Warr.*

Kúlú.

**EVARZIA**, *Walk.*trilinearia, *Moore.***AZATA**, *Walk.*ferruginata, *Moore.***OZOLA**, *Walk.*microniaria, *Walk.*

## FIDONIIDÆ.

**FIDONIA**, *Treit.*strenuata, *Walk.* (*Macaria*).

Umballa.

**STERRHA**, *Hüb.*sacraria, *Linn.***ASPILATES**, *Treit.*obliquaria, *Moore.*

Kúlú.

hastigera, *Butl.* p. 112, Pl. CXXXVII. ff. 4, 5.

Láká and Afghanistan.

**NADAGARA**, *Walk.*grisea, *Butl.***ZOMIA**, *Moore.*incitata, *Walk.*

## ZERENIDÆ.

**ICTERODES**, *Butl.*conspersa, *Butl.* p. 113, Pl. CXXXVII. f. 6.**MICRABRAXAS**, *Butl.*punctigera, *Butl.* p. 113, Pl. CXXXVII. f. 7.**ABRAXAS**, *Leach.*virginalis, *Butl.*

Cashmere.

martaria, *Guén.***LIGDIA**, *Guén.*adustata, *Schiff.*costata, *Guén.***PERCNIA**, *Guén.*guttata, *Fab.*belluaria, *Guén.***NELCYNDA**, *Walk.*substigmaria, *Walk.*

## LARENTIIDÆ.

**LARENTIA**, *Dup.*exlitrata, *Walk.*ramularia, *Feld.* (*Cidaria*).

Láká.

granitalis, *Butl.* p. 114, Pl. CXXXVII. f. 8.**PHRISSOGONUS**, *Butl.*

sp. ?, ♀ (much worn).

**EUPITHECIA**, *Curt.*signigera, *Butl.*rufescens, *Butl.*fulvipennis, *Butl.* p. 114, Pl. CXXXVII. f. 9.atrisignis, *Butl.* p. 114, Pl. CXXXVII. f. 10.silenata, *Stdg.*isogrammata ?, *Treit.*



**EUPITHECIA.**

- haworthiata*, Dbl.  
*lucigera*, *Butl.* p. 115, Pl. CXXXVII. f. 11.  
*hockingii*, *Butl.* p. 115, Pl. CXXXVII. f. 12.

**LOBOPHORA**, *Curt.*

- lucinda*, *Butl.* (*Eupithecia*).  
*julia*, *Butl.*  
*viretata*, *Hüb.*  
*rufinotata*, *Butl.* p. 116, Pl. CXXXVII. f. 13.  
 Kúlú.

**LYGRANOA**, *Butl.*

- cinerea*, *Butl.*

**THERA**, *Steph.*

- consimilis*, *Warr.* p. 116, Pl. CXXXVII. f. 14.

**MELANIPPE**, *Dup.*

- cymaria*, *Walk.* (*Coremia*).  
*albofasciata*, *Moore* (*Cidaria*).  
*flavistrigata*, *Warr.*  
*minuta*, *Butl.* p. 117, Pl. CXXXVII. ff. 15, 16.  
*despicienda*, *Butl.* p. 117, Pl. CXXXVII. f. 17.

**COREMIA**, *Guén.*

- divergens*, *Butl.* p. 118, Pl. CXXXVII. f. 18.

**CAMPTOGRAMMA**, *Steph.*

- fluviata*, *Hüb.*  
*gemmata*, *Hüb.*  
*signataria*, *Walk.*

**PHIBALAPTERYX**, *Steph.*

- plurilinealis*, *Moore.*

**SCOTOSIA**, *Steph.*

- dubiosata*, *Walk.*  
*indistincta*, *Butl.* p. 118, Pl. CXXXVII. f. 19.

**PHOTOSCOTOSIA**, *Warr.*

- miniosata*, *Walk.* (*Scotosia*).  
*amplicata*, *Walk.*  
*tresignata*, *Moore* (*Cidaria*).  
 Láká.

**CIDARIA**, *Treit.*

- russata*, *Schiff.*  
 var. *cinereata*, *Moore.*  
*umbrosaria*, *Motsch.*  
*nivicineta*, *Butl.* p. 119, Pl. CXXXVII. f. 20.  
*seriata*, *Moore.*  
 var. *affinis*, *Moore.*  
*perpulchra*, *Butl.*  
*aliena*, *Butl.*  
*signata*, *Moore.*  
*thomasata*, *Warr.*  
*albigirata*, *Koll.*  
*multistriata*, *Butl.* p. 119, Pl. CXXXVII. f. 21.

**DOCIRAVA**, *Walk.*

- vastata*, *Walk.* (*Anaitis*).  
*uvaria*, *Walk.* (*Aspilates*).  
*æquilineata*, *Walk.*  
*medmaria*, *Walk.* (*Orsonoba*).  
*reciproca*, *Walk.* (*Eubolia*).  
*macrocalata*, *Walk.* (*Anaitis*).

**EUBOLIIDÆ.****EUBOLIA**, *Dup.*

- niphonica*, *Butl.\**  
*næmata*, *Feld.* (*Cidaria*).

**PHRATARIA**, *Walk.*

- triangulifera*, *Moore* (*Eustroma*).

**SIONIDÆ.****STAMNODES**, *Guén.*

- pamphilata*, *Feld.*  
 Láká.

\* It is possible that this may be a dark and slightly differentiated form of *E. næmata*; the outline of the central belt of primaries, however, differs somewhat.

## SPHINGIDÆ.

AMPELOPHAGA, *Brem.**Ampelophaga fasciosa*. (Plate CXXI. fig. 3.)

*Ampelophaga fasciosa*, *Moore, Proc. Zool. Soc.* 1888, p. 391.

Closely allied to the *A. rubiginosa* of Bremer from Japan and China, but differing constantly in its more acuminate primaries with longer outer margin; indistinct and more diffused markings; the distinctly ash-coloured external border of primaries, and absence of the fuscous markings on this border. Expanse of wings, ♂ 85–90 millim., ♀ 96 millim.

Dharmasala.

Mr. Hocking only obtained this species at sugar.

POLYPTYCHUS, *Hübner*.*Polyptychus trilineatus*. (Plate CXXI. fig. 4.)

*Polyptychus trilineatus*, *Moore, Proc. Zool. Soc.* 1888, p. 390.

♀. Allied to *P. timesius*, but with all the paler parts of the wings of a pale whitish-buff colour instead of grey; the first line of primaries further from the base; the central diffused belt less prominent, olivaceous brown; the second line wholly wanting; the internal quadrate spot of secondaries brown instead of black; all the other markings paler and more olivaceous than in the female of *P. timesius*. Expanse of wings 103 millim.

Dharmasala.

AMBULYX, *Schaeffer*.*Ambulyx placida*. (Plate CXXI. fig. 1.)

*Ambulyx placida*, *Moore, Proc. Zool. Soc.* 1888, p. 390.

♀. Nearest to *A. maculifera*, but the primaries, abdominal border of secondaries, and body of a pale chalky-greyish colour; the lateral belts on the thorax dark olive-brown: the basal spot on primaries small but sharply defined, as is also the larger spot placed obliquely beyond it towards the inner margin; a minute black dot on the lower discocellular veinlet; the premedian line single as in *A. liturata*; the discal lines very indistinct, partly lost in a purplish-grey belt which commences on the inner margin and gradually fades away as it crosses the radial interspaces; submarginal arched line distinct and broadly bordered inter-

nally with ochreous and whitish : secondaries more ochreous and with the markings grey instead of rufous brown : abdomen without a dorsal line. Expanse of wings 114 millim.

Solon, Himalaya.

Said to be a rare species.

**Ambulyx rubescens.** (Plate CXXI. fig. 2.)

*Dahira rubescens*, Moore, MS.

*Dahira rubiginosa*, Moore, *Proc. Zool. Soc.* 1888, p. 391.

Most like the *A. eos* group : primaries rosy brown with cupreous-brown apical border and bands, the latter ill-defined, six or seven in number, four or five of which are undulated and cross the disc from the end of the cell to the apical border ; two or three basal spots, three costal between the discal bands, an oblique angular apical dash and a series of dots on the fringe whitish grey : secondaries dark lurid orange, the abdominal half and margin dusky ; abdominal and costal borders whitish ; fringe white : body purplish brown, the margins of the antennæ, eyes, and sides of abdominal segments whitish. Primaries below dull brick-red, with grey external border tapering to apex and external angle and with undulated inner edge : secondaries paler red, whitish on abdominal border, traversed from this border to the costa by four equidistant slightly sinuous parallel deeper red lines : body below bright chrome-yellow ; palpi reddish ; legs greyish white, middle and posterior tibiæ reddish, posterior tarsi barred with reddish ; venter reddish barred with segmental grey lines at the sides ; two series of reddish spots ; anal claspers reddish with white bases. Expanse of wings 75 millim.

Mundi, an independent native state in the Himalayas. Taken in March at sugar.

Apparently most nearly allied to *A. turbata* ; though slightly differing in the contour of the secondaries, it scarcely can be regarded as a distinct genus from *Ambulyx*.

The description of this species was prepared and the Plate illustrating it printed off before Mr. Moore's paper was received, and therefore it has been necessary to retain the name written by him on the type-label.

PSYCHIDÆ.

**MAHASENA**, Moore.

Allied to *Bambalina*, Moore, from Ceylon : costal vein of primaries terminating at second third of costal margin ; subcostal quinquenervose ; the first branch emitted from outer third of the main vein and reaching the costal margin just beyond the costal vein ; second branch emitted just before the end of the cell and terminating near to the apex ; third and fourth branches emitted from a long footstalk at the upper angle of the cell ; fifth branch emitted close to the latter ; discocellulars strongly angulated ; upper radial emitted from a little



triangular false cell, of which the upper discocellular veinlet forms the base; lower radial emitted with the third median branch from a footstalk at the inferior angle of the cell; submedian vein looped as in the allied genera: costal vein of secondaries aborted, running downwards into the subcostal, so as to form a pre-discoidal cell; discoidal cell extremely broad and divided by two slender forked recurrent veins; its outer margin irregular and oblique, the subcostal thick and simple; two veins, perhaps modified subcostal branches, emitted separately as radial veins; the true radial vein emitted with the third median branch from a short footstalk: antennæ short, pointed, and with ciliated pectinations broader than in *Bambalina*.

**Mahasena hockingii.** (Plate CXXI. fig. 5.)

*Mahasena hockingii*, Moore, *Proc. Zool. Soc.* 1888, p. 397.

♂. Smoky brown; secondaries with whitish subhyaline abdominal border; body blackish piceous, with paler antennæ and ventral surface. Expanse of wings 31 millim.

Succoor, Kangra valley, 4000 feet. Larva on Toon tree.

CHALCOSIIDÆ.

**GYNAUTOCERA**, Guér.

**Gynautocera fraterna.** (Plate CXXI. fig. 7.)

♀. Allied to *G. papilionaria*, but with the white spot on the secondaries widened and extended into a band, interrupted above the radial vein and below the first median branch, the two spots thus separated from it being somewhat obscured; the outer edge of the band zigzag; the outer half of the median vein and its branches, the outer half of the interno-median fold and of the submedian vein green; the apical spot of the band with diffused blue borders. Expanse of wings 78 millim.

Two examples, Calcutta.

**BORADIA**, Moore.

**Boradia carneola.** (Plate CXXI. fig. 8.)

Semitransparent yellowish white; the base of the primaries more distinctly yellow; thorax dull stone-yellowish; antennæ with black pectinations; abdomen black; wings below whiter than above; ventral surface of body black; anal claspers of male horn-yellowish. Expanse of wings 33 millim.

Kangra valley.

**ANOMÆOTES, Felder.**

Mr. Moore considers *A. basalis* the type of a distinct genus, which he calls *Akesina*, but it corresponds almost exactly, in both colouring and structure, with a species of *Anomæotes* which we have from Ambriz collected by the late Mr. Monteiro; the only differences in structure are that *Akesina* has slightly shorter wings, the upper discocellular veinlet of the primaries is a trifle longer and the minute terminal furcation of the second subcostal branch is wanting, thus practically reducing the number of subcostal branches from four to three.

**Anomæotes basalis.** (Plate CXXI. fig. 9.)

*Akesina basalis*, Moore, *Proc. Zool. Soc.* 1888, p. 396.

Wings hyaline; the primaries, excepting the basi-internal area which is tinted with orange, grey; secondaries with the basal half orange, the external half grey; body orange-fulvous, antennæ brown. Under surface similar. Expanse of wings 28 millim.

Kangra valley.

**ARCTIIDÆ.****SPILARCTIA, Bull.****Spilarctia dalbergæ.** (Plate CXXII. fig. 2.)

*Spilarctia dalbergæ* (part.), Moore, *Proc. Zool. Soc.* 1888, p. 394.

♂ ♀. Nearest to *S. nydia*; the arrangement of the spots on the wings almost exactly the same, but the primaries and thorax pale pinky buff, the latter with a longitudinal black dorsal line; secondaries much whiter than in *S. nydia*; abdomen orange-ochreous instead of carmine-red. Expanse of wings, ♂ 47 millim., ♀ 47–50 millim.

Dharmasala. (Larva on Geranium, April 12th, spun up at once; imago 24th May.)

The type-label was written *S. dalbergæ* (sic).

**Spilarctia howqua.** (Plate CXXII. fig. 3.)

♂. Allied to *S. confusa*, from which it differs in its much whiter wings and thorax; the postmedian series of spots on the primaries more prominent and less sinuous; the submarginal spots of the secondaries placed further from the outer margin, the first from the abdominal margin elongated so as to reach the outer margin near the anal angle; the third and fourth less prominent; the secondaries show no trace of the rosy colouring of *S. confusa*; the abdomen has no dorsal series of spots, but this is often the case with *S. confusa*. On the

under surface the primaries are white, the costa and discoidal cell slightly tinted with rose-red; the spots of the postmedian series are distinct, and those nearest the costa much enlarged: the secondaries are whiter than above, with similar markings: body below white; a tuft at the base of the primaries; the anterior coxæ and upper surface of femora rose-red; tibiæ and tarsi greyish brown, but the posterior tibiæ varied with white; venter with two lateral series of black spots. Expanse of wings 39 millim.

Kangra valley.

*S. sagittifera* of Moore does not appear to be distinct from *S. casigneta*, Kollar, and therefore is not described here.

### THYRGORINA, Moore.

*Thyrgorina dorsalis*. (Plate CXXII. figs. 4, 5.)

*Icambosida dorsalis*, Moore, *Proc. Zool. Soc.* 1888, p. 394.

Allied to *T. rhodophila*; the wings more elongated; the secondaries of the male with a grey spot at the end of the cell, those of the female sometimes with three widely separated submarginal spots, the first indistinct, subcostal, the second subapical, the third close to the outer third of the first median branch; thorax of male above ochreous, of female white; abdomen of the female with a broad central carmine belt, with dorsal and lateral black spots; the basal and anal segments snow-white; abdomen of male wholly carmine: wings and body below white; costa of primaries cream-coloured, not orange as in *T. rhodophila*. Expanse of wings, ♂ 36 millim., ♀ 43–50 millim.

Dharmasala.

The *Euprepia imperialis* of Kollar (collected by Mr. Hocking) has hitherto been placed in the genus *Areas*: in neuration it is very similar, excepting that the lower half of the discocellular veinlet is comparatively slightly longer, and the lower radial of primaries and radial of secondaries are emitted from the same point with, instead of close to, the third median branches; the antennæ, however, are decidedly longer and more closely pectinated, and the palpi much longer and coarser in Kollar's species, which may be separated under the name of *Melanareas*.

### LACHANA, Moore.

Form and neuration of *Phaos*; pattern very similar but obscure; body similar to that of *P. huttonii*, with a number of long and rather straight pale hairs from the tegulæ and abdomen; antennæ much more broadly pectinated. Type *L. ladakensis*.

In his 'Revision of Australian Lepidoptera,' part I, Mr. Meyrick has separated two species, one of which is *P. huttonii*, under the generic name of *Metacrias*; an examination of the



wings of this species, when saturated with benzine, shows no difference whatever from those of *Phaos vicens*, nor are any of the characters by which it is separated at all reliable. The genus *Phaos* is also described as the *Spilosoma* of Stephens (the type of which is *S. menthastris* of Europe): the latter differs in the much more woolly clothing of the thorax; broader and comparatively shorter tegulæ; more slender and longer antennæ; narrower, longer, and more scantily clothed palpi; much more slender legs; more robust abdomen, without lateral or anal tufts; comparatively longer and narrower wings, which are also less densely scaled; more nearly approximated veins; and totally different style of coloration,—in short it would be difficult to find two genera of Arctiidae less alike, excepting in the general distribution of the veins; but if this character alone were recognized, the bulk of the genera of this family would probably have to be placed together.

*Lachana ladakensis*. (Plate CXXI. fig. 6.)

*Lachana ladakensis*, Moore, *Proc. Zool. Soc.* 1888, p. 398.

Primaries pale yellowish brown; basal third grey, bounded externally by an ill-defined oblique darker band; an ill-defined dusky spot at centre of costa, followed beyond the cell by a second lunate costal spot; a black spot on the discocellular veinlet; an irregularly zigzag submarginal greyish-brown band and a regular border of the same colour; fringe spotted with brown: secondaries greyish brown, with a broad dark brown external border and pale fringe: body black, clothed with long silver-grey and pale brown hairs; antennæ with orange basal joint, shank pale brown, pectinations dark mahogany-brown. Wings below paler, most of the markings on the primaries obliterated; the secondaries pale yellowish brown, with smoky-brown external border and buff-coloured fringe: body below blackish, clothed with pale brown hairs. Expanse of wings 26 millim.

Ladak.

At first sight one would suppose this species to be more nearly related to *Antarctia* or *Cynia* than to *Phaos*; but a close examination of its structure proves its affinity to the latter: Mr. Moore unaccountably refers it to the Liparidæ.

DIPHTERA, *Ochs.*

*Diphtera fasciata*. (Plate CXXII. fig. 1.)

*Diphtera fasciata*, Moore, *Proc. Zool. Soc.* 1888, p. 408.

Nearest to *D. pallida*: primaries dull greyish green; seven mostly equidistant black costal markings, the third and seventh broad and elongated, the others mere dots or small spots; three additional basal spots; an irregular white-edged black marking at base of inner

margin; external third slightly darker than the rest of the wing, especially internally, bounded on its inner edge by a partly black doubly arched undulated line; outer edge of fringe lunulated, bronze-brown spotted with silvery white: secondaries white, sericeous, semitransparent: body white, the head, thorax, and base of abdomen tinted with green. Under surface sericeous greenish white: primaries with five costal black spots, the third and fifth large and elongated; outer edge of fringe ornamented with black lunules: secondaries with two series of black spots, one of which, in the inner series, closes the cell; a few scattered black submarginal scales and one or two on the fringe: legs white, barred with black; venter dark brown, with whitish anus and white lateral dots. Expanse of wings 42 millim.

"Laka, above Dharmsala, 11,000 feet; at light in June."

## LITHOSIIDÆ.

MILTOCHRISTA, *Hüb.**Miltochrista pretiosa*. (Plate CXXII. fig. 6.)

Near to *M. gratiosa*, but the three series of grey spots on the primaries so much widened as to give the impression of three distinct transverse grey bands, the longitudinal nervular grey lines on the disc widened so as to be partly confluent, forming a broad grey belt which is only interrupted by yellow-edged internervular scarlet lines extending into an irregular yellow external border; secondaries paler and more transparent than in *M. gratiosa*. Expanse of wings, ♂ 35 millim., ♀ 45 millim.

Dharmsala, taken at sugar.

The group to which this species belongs forms another of those oft recurring groups of constant though nearly allied forms which the too hasty worker is tempted to associate as varieties: the series of *M. pretiosa* collected by Mr. Hocking sufficiently proves the constancy of the Dharmsala type.

A worn female of *Miltochrista congerens* bears the label "*Lyclene artocarpi*, Moore;" as it corresponds exactly in pattern with Felder's species, it can hardly be distinct.

*L. artocarpi* is described by Mr. Moore, Proc. Zool. Soc. 1878, p. 30, and again in Descr. Ind. Lep. Ins. Atkinson, p. 33, where it is said to be most nearly allied to *L. humilis*, Walk.: whether the example in Mr. Hocking's collection is identical with the latter may be considered doubtful.

**SETINA, Schr.****Setina dasara.** (Plate CXXII. figs. 7, 8.)♂. *Setina dasara*, Moore, *Cat. Lep. E.I. Comp.* ii. p. 303. n. 698.

Primaries ochreous, crossed by two irregular grey bands, broad in the male, but narrow in the female; a black spot near the base and a second at end of cell: secondaries cream-coloured, the male with a diffused grey subapical spot: body ochreous; anal segment of the male partly clothed with blackish hairs; thorax with black shoulder-spots. Under surface, excepting the costa of primaries (which is ochreous), cream-coloured; the grey markings more diffused; tibiæ and tarsi of anterior legs grey; tarsi of middle and posterior legs blackish. Expanse of wings, ♂ 24 millim., ♀ 27 millim.

Kúlú.

The types of this species consisted of a rather large male and the female of Mr. Moore's *Challa quadrimaculata*, described by him as *Setina calamaria*.

**CHALLA, Moore.**

Near to *Setina*; the body rather more robust, the antennæ of the male pectinated instead of finely ciliated; the subcostal branches of the secondaries emitted from a shorter footstalk.

**Challa quadrimaculata.** (Plate CXXII. fig. 9.)♂. *Challa quadrimaculata*, Moore, *Proc. Zool. Soc.* 1888, p. 395.♀. *Setina calamaria*, Moore, *l. c.* p. 392.

♂. Primaries ochreous, with brighter costal border; a black spot within the anterior angle of the discoidal cell: secondaries paler, with a grey spot on the upper half of the discocellular veinlet: body ochreous; shank of antennæ white, pectinations dark grey; abdomen with an ill-defined lateral series of black dots; anterior pair of legs with a black line down the front; second pair black at the knees and at the distal extremity of the tibiæ and tarsi; third pair black at the end of the tarsi. Expanse of wings 33 millim.

♀. Nearly resembling the male, but the primaries with a black spot at the base of the cell and an indistinct dot at the base of the costa. Expanse of wings 27 millim.

Palampore.

A small male (28 millim. in expanse), without the grey spots on the secondaries, was labelled by Mr. Moore as his *Challa bimaculata*; if this is correct the species should perhaps take the latter name, although four spots are usually present: the female (from Java) was originally described as that sex of *Setina dasara*, the true sexes of which are figured on Plate CXXII. of this part.



ÆMENE, *Walk.**Æmene inconstans.* (Plate CXXII. fig. 11.)

*Æmene inconstans*, *Moore, Proc. Zool. Soc.* 1888, p. 393.

Primaries above pale buff; two blackish dots, on each side of the median vein, at about basal third; two brown dots placed obliquely below the cell just beyond the middle of the wing; a conspicuous **C**-shaped black spot at the end of the cell; a transverse subapical costal brown spot; a marginal series of minute black dots and a black dot at about the centre of the costa; base of costal margin greyish: secondaries cream-coloured: body above pale buff, with the base of the antennæ, shoulders, and centre of thorax brownish. Under surface cream-coloured: primaries inclining to buff, clouded with greyish brown; a brown spot at the end of the cell and a marginal series of brown points: secondaries with the costal area irrorated with brown; an interrupted slender marginal brown line; a brown dash at the end of the cell: pectus and anterior femora silvery whitish. Expanse of wings 18 millim.

Dharmasala.

*Æmene sagittifera.* (Plate CXXII. fig. 12.)

*Æmene sagittifera*, *Moore, Proc. Zool. Soc.* 1888, p. 392.

Primaries creamy white; base of costal margin black, confluent with an oblique subbasal bar; immediately beyond this, three black dashes in an oblique series—the first of these is costal and is followed by two smaller costal spots, below each of which is a linear black dot; below the first costal spot and within the cell is a large subcuneiform black spot, and below this again two small black spots parallel to the first oblique series; at the end of the cell is an irregularly formed hastate spot followed by a group of five dots, and from below the latter to the inner border are two parallel oblique series of three dots; a black triangular subapical costal patch interrupting an arched series of black points; a marginal series of black spots and three grey spots on the fringe: secondaries greyish white in the male, pearl-grey in the female: thorax white, abdomen grey. Underside pearl-grey: secondaries pale. Expanse of wings 18 millim.

Dharmasala.

CALLINOLA, *gen. nov.*

Allied to *Nola*, but readily distinguished by its shorter palpi, strongly pectinated incurved antennæ, more arched thorax, and comparatively shorter wings. Type *C. antennata*.

The pattern of the wings in the species of this genus differs considerably from that of *Nola*, the outer line of the central band of the primaries being falciform instead of denticulated or zigzag, whilst the central band itself is crossed in both the known species by a series of sharply defined black dashes partly united, and thus tending to form an acutely denticulated line.

**Callinola scripta.** (Plate CXXII. fig. 13.)

*Ræselia scripta*, Moore, *Proc. Zool. Soc.* 1888, p. 393.

Very near to *C. antennata* from the Amazons; it chiefly differs in its superior size, in the straight instead of arched black inner edge to the median band of primaries, in the outer line of the band being continuous instead of being formed by a series of black spots, in the presence of two brown lines outside each of the black ones, and of an irregular submarginal series of unequal black spots. Expanse of wings 19 millim.

Dharmasala.

**LEBENA, Walk.****Lebena angulata.** (Plate CXXII. fig. 14.)

*Ræselia angulata*, Moore, *Proc. Zool. Soc.* 1888, p. 393.

Closely allied to *L. trinotata* (= *sexmaculata*, Grote) from North America; it differs only in being smaller, with slightly narrower primaries, and in the wider sinuations of the submarginal line of these wings; the markings are also a little less strongly defined. Expanse of wings 16-17 millim.

Kangra valley.

"*Ræselia fraterna*" of the same collection appears to be simply a suffused example of *Lebena angulata*.

**SIMAREEA, Moore.****Simareea lurida.** (Plate CXXII. fig. 10.)

*Lithosia basinota* (part.), Moore, *Proc. Zool. Soc.* 1865, p. 798.

Smaller in both sexes than *S. basinota* of Darjiling: the primaries usually considerably redder to beyond the middle and thence decidedly greyer and paler: secondaries much paler, almost pure white instead of pale smoky brown, and with a distinct suffused blotch of pale ferruginous from the costa to the median vein; outer border slightly browner than the rest of the wing: head, base of abdomen, and anal segment whiter. Under surface considerably paler, all the wings with the costal area to beyond the middle broadly suffused with ferruginous: primaries with a shorter dark costal streak: body below pale brown. Expanse of wings 42 millim.

♂ ♀, Dharmasala; at light, June.

There are seven examples of this species in the Museum collection.

## LIPARIDÆ.

EUPROCTIS, *Hüb.**Euproctis abdominalis*. (Plate CXXIII. figs. 4, 5.)

*Euproctis abdominalis*, *Moore, Proc. Zool. Soc.* 1888, p. 398.

♂ ♀. Nearly allied to *E. antica*; the wings and thorax of the male cream-coloured, the primaries and thorax of the female more cream-coloured than in *E. antica*; the abdomen in both sexes blacker, the anal tuft of the female brownish yellow. Expanse of wings, ♂ 28 millim., ♀ 33 millim.

Kúlú.

From the fact that the male is somewhat malformed and both sexes in poor condition generally, it seems not unlikely that this form may turn out to be nothing more than *E. antica* underfed; the abdomen, however, is decidedly darker, nearly as black as in *E. melanophila*, and the duller colouring of the anal tuft would appear to be a good distinctive character.

CHÆROTRICHA, *Feld.**Chærotricha sulphurens*. (Plate CXXIII. figs. 6, 7.)

*Artaxa sulphurens*, *Moore, Proc. Zool. Soc.* 1888, p. 399.

Allied to *C. darsa* of Java and *C. inconcisa* of Darjiling. Primaries varying from pale creamy sulphur-yellow to pale ochreous; a few brown scales, indicating the commencement of an oblique band, between the cell and inner margin of the male, wholly absent from the primaries of the female: secondaries sericeous white, the abdominal area and fringe tinted with the colouring of the primaries: thorax distinctly ochreous or pale yellowish white; abdomen greyish black, but the two or three basal segments of the male and all the segments of the female covered above with pale buff or whitish hair; the centre and edges of the following segments in the male and the anal tuft ochreous. Under surface creamy white, centre of venter purplish black, anal tuft ochreous. Expanse of wings, ♂ 38–41 millim., ♀ 48 millim.

Kangra valley, 4000 feet. Larva at Palampore, 26th April, on willow.

TRISULOIDES, *Butl.**Trisuloides cærulea*. (Plate CXXVIII. fig. 3.)

Primaries steel-grey, sericeous; pattern almost identical with that of *T. sericea*, but the pale oblique belt beyond the middle more complete, with more distinct, grey, lunulated stripes across it; the patch near external angle quite white, with the spots upon it grey: secondaries



prussian blue; the base, costal area, and external margin dark brown shot with purple; fringe white towards anal angle, spotted with white between the anal patch and the apex: body much blacker than in *T. sericea*, but the male with whitish collar. Under surface blackish, tinted with purple: primaries with a large, quadrate, ochreous patch in the cell and a broad irregular ochreous band beyond it; apical portion of costal borders and fringe regularly spotted with whitish; fringe at external angle white: secondaries shot with blue on abdominal half; two very oblique blue-black stripes from costa to first median branch, where they are united, the outer stripe being continued to anal angle; fringe as above: ventral surface of body dull blackish grey. Expanse of wings, ♂ 69 millim., ♀ 73 millim.

Dharmasala; at sugar in August.

"The pair, a male and female, caught on one evening: the only specimens met with."

This beautiful species was evidently regarded by Mr. Hocking as one of the *Noctuities*, with which he associated it in his boxes; consequently it was not discovered until the *Bombyces* of the collection had been worked out and the plates prepared. It bears some resemblance to the American genus *Hypogramma*; but structurally it corresponds more nearly with the *Liparid* genus *Trisula*, to which there is no doubt of its affinity. In *Trisuloides* the proboscis is well developed (as, indeed, it is in many *Bombyces*), and therefore the fact of its having been obtained by sugaring is not surprising.

#### CHARNIDAS, Walk.

*Charnidas umbrina*. (Plate CXXIII. fig. 8.)

*Procodeca umbrina*, Moore, *Proc. Zool. Soc.* 1888, p. 398.

♂. Allied to *C. exclamationis* and *ochracea*. Primaries vinous brown; an angular series of black-centred spots slightly paler than the ground-colour across the disc: secondaries thinly scaled on the basal two thirds (giving the wing a greyish appearance), smoky brown, slightly vinous on the fringe: thorax dull rufous brown; abdomen dark smoky brown. Under surface smoky brown; veins and borders of the wings paler, inclining to buff: palpi, tibiæ and tarsi of front pair of legs and tarsi of other legs ochreous. Expanse of wings 34 millim.

Kúlú.

"Larvæ under stones, March 22nd, on which date were found larva, pupa, and imago." According to Mr. Moore *Charnidas litura* was confounded with it.

The genus *Procodeca* was founded by Mr. Walker for the reception of his supposed new species *P. quadrata*, which consisted of three examples of *Lælia cænosa* and eight poor specimens of *L. obsoleta*.

## PARORGYIA, Pack.

*Parorgyia dalbergiæ*. (Plate CXXIII. figs. 9–11.)

*Dasychira dalbergiæ*, Moore, *Proc. Zool. Soc.* 1888, p. 399.

Allied to *P. inclusa*. Primaries dull copper-brown, with a faintly indicated, paler, sub-basal spot; an angulated, black-edged, pale marking at the end of the cell, two or three black spots at base; a cluster of whitish scales before the middle of the costa; an undulated black line, white-edged on the costa, bounding a discal series of black-pupilled, oval, pale brown spots; a marginal series of pale-bordered, subconical, black spots: secondaries whity brown: thorax slightly greyer than the primaries; abdomen whity brown, with blackish dorsal tufts on the basal segments. Under surface whity brown: discoidal area of primaries greyish; a grey spot at the end of the cell and an oblique grey stripe starting just beyond the third fourth of the costal margin and crossing the disc to the first median branch; a series of grey spots on the fringe: secondaries with a minute greyish dash at the end of the cell and a subangulated, grey, discal stripe at third fourth: palpi, front of pectus, and anterior legs smoky brown. Expanse of wings 37 millim.

♀. Considerably larger than the male: the primaries more elongated; the discocellular spot and the pale discal spots widened, confluent; the submarginal black pupils of the marginal spots modified into lunules and with white inner edges: antennæ and front legs sprinkled with whitish scales. Expanse of wings 66 millim.

Kangra valley.

♂, var.? Broader and much darker than the type: the primaries irrorated with white; a conspicuous white subbasal spot; black centres of the discal series of spots more prominent, partly white-edged; submarginal, white-edged, blackish lunules more nearly as in the female; the discal stripe on under surface of all the wings further from the outer margin. Expanse of wings 41 millim.

Kangra valley.

The caterpillar of this species (see Plate CXXXVIII. fig. 12) is of a brown colour and is considerably more like that of *Orgyia* than of *Dasychira*.

## LYMANTRIA, Hübn.

*Lymantria nigra*. (Plate CXXIII. figs. 2, 3.)

*Lymantria nigra*, Moore, *Proc. Zool. Soc.* 1888, p. 399.

Near to *L. marginata*, Walk., from Silhet and Darjiling. The male much darker owing to the fact that all the brown intervals between the black lines on the primaries are much narrower and of a deeper brown colour. The female differs in the greater width and consequent confluence of the black lines across the primaries; the secondaries sometimes have

an oblique 7-shaped black dash on the discocellulars. In all other respects the two species agree. Expanse of wings, ♂ 41–47 millim., ♀ 66 millim.

Kangra valley.

Taken at rest on the bark of mango trees.

The *L. carnecolor* of Moore, described in the same paper as the above, seems identical with Walker's *L. concolor*.

## LASIOCAMPIDÆ.

### EUPTEROTE, Hübn.

#### *Eupterote fraterna*. (Plate CXXIII. fig. 1.)

*Eupterote fraterna*, Moore, *Proc. Zool. Soc.* 1888, p. 406.

♂. Allied to *E. subdita*. Fox-brown, tinted with pink: basal area of primaries crossed by about six parallel indistinct greyish lines (only visible when examined from the side); a dark wavy central stripe, wide on costa, very oblique and almost straight from costa to lower radial vein; two regularly crinkled lines parallel to the central stripe beyond the middle; the commencement of two other barely visible lines beyond the latter; two parallel, nearly straight, dark grey lines across the disc; two subapical, grey, ocelloid spots and a faint indication of the usual submarginal line: secondaries with three scarcely visible, parallel, central, wavy lines; two grey parallel lines across the disc and the usual submarginal line, but indistinct; head and collar ochraceous. Under surface with all the markings excepting the two discal lines obsolete. Expanse of wings 90 millim.

Dharmasala; on a wall.

Although at first sight this species might be taken for a pale example of *E. cupreipennis* an examination of the markings on the wings and the colouring of the head and collar show it to be more nearly related to *E. subdita*; it is, however, quite distinct from any species in the Museum series.

### TARAGAMA, Moore.

#### *Taragama castanoptera*. (Plate CXXIV. fig. 1.)

*Taragama castanoptera*, Moore, *Proc. Zool. Soc.* 1888, p. 404.

♀. Allied to *T. repandum*. Considerably larger and of a deep reddish-chocolate colour, upon which the whitish markings show up strongly; the secondaries and abdomen similarly coloured to the primaries or only a little paler; the whitish band on the primaries narrow, the veins beyond the band whitish; the fringe cream-coloured as on the primaries: the thorax is creamy whitish, with a large patch of reddish chocolate on the tegulæ; the abdomen



deep reddish chocolate, with whitish fringes to the segments. Under surface similar to *T. repandum*, but with the veins whitish. Expanse of wings 91 millim.

♀, Kangra valley; from pupæ spun in fern.

We have what seems to be the male of this species in the Museum collection; like the female it is larger than the corresponding sex of *T. robustum*, the primaries being comparatively longer and narrower. The entire insect is greyer, darker, and more uniformly coloured. *T. igniflua* of Ceylon, the female of which much resembles that sex of *T. castanoptera*, may be distinguished by its whitish abdomen and paler secondaries. The male is too dissimilar to be confounded with that sex of the Kangra species, inasmuch as it closely resembles its female.

## SATURNIIDÆ.

### SATURNIA, Schr.

#### *Saturnia hockingii*. (Plate CXXIV. figs. 2, 3.)

*Saturnia hockingii*, Moore, *Proc. Zool. Soc.* 1888, p. 402.

Intermediate in character between *S. anna* and *S. pavonia-minor*: form of *S. anna*; coloration of *S. pavonia-minor* ♀, but without the white patches and borders; the first black-edged band of the primaries placed nearer to the base, the ocellus transversely ovate; a brown nebula above and below the ocellus and a whity-brown nebula beyond it; the two undulated black discal lines much more deeply sinuated; a third, but less sharply defined line inside the ordinary lines from inner margin to median vein; no red spot below the variegated apical patch; ordinary submarginal line very slender and more irregular than in *S. pavonia-minor*; a second blacker line beyond it, limiting the brown external border: secondaries with only one dusky stripe across the basal third, ocellus coloured similarly to that of the primaries, paler than in the European species and enclosing a prominent pure white lunule; area beyond the ocellus pink; discal and submarginal lines differing somewhat as on the primaries: banding of abdomen obsolete. The under surface differs much as above. Expanse of wings, ♂ 96 millim., ♀ 103 millim.

Kúlú. Cocoon under stones.

The female is a little darker than the male.

## LIMACODIDÆ.

### EURABILA, gen. nov.

Nearest to *Rabila*, but in some respects corresponding with *Thyatira* and *Gonophora*. The thorax higher; the tegulæ longer and more pointed; the metathorax with a cup-like

crest; abdomen very similar to *Thyatira*, with the same tufts; palpi short, thick, with very short terminal joint; antennæ slender, tapering, with extremely short and fine ciliation; legs very robust, with very woolly femora; wings longer than in *Rabila*, with very similar neurulation.

**Eurabila lignea.** (Plate CXXVIII. fig. 6.)

Most like the genus *Bacula*, from Venezuela, in the style of coloration of the primaries; the latter are pale olive-brown, varied with whitish; the basal fifth vinous brown, varied with whitish and with slaty grey on the costa, bounded towards inner margin by two conspicuous dark brown spots; centre of costal border white, barred with slaty grey; central belt represented by two very irregular divergent white stripes edged with olive-brown; four dark mahogany-brown oblique lines in the cell, the first and fourth edged externally, and the second internally, with white; reniform marking narrow, elongated, white with olive-brown central and mahogany-brown external line; two stripes between the cell to the inner margin, the first angulated, mahogany-brown, abbreviated, the second for the most part olive-brown, zigzag; veins on each side of the central belt white spotted with black; an irregularly sinuated, dark mahogany-brown, submarginal band commencing in a partly slaty-grey triangular costal patch and bounded externally by a whitish line; apex pale olivaceous spotted with mahogany-brown; remainder of external border varied by blackish lines and pyriform slaty-grey spots upon the veins: secondaries pale greyish brown, with slightly darker external border and discocellular spot; basi-costal area pearly white: head dark grey irrorated with whitish, back of head and centre of collar whitish; thorax whitish; shoulders and tegulæ purplish brown; dorsal crest with purplish and buff edges; abdomen pale brown with reddish tufts. Wings below sericeous whitish, the costal borders slightly reddish and speckled with blackish scales; centre of primaries greyish in certain lights; all the wings with two greyish discal lines; a marginal series of blackish dots; fringe of primaries tipped with black; secondaries with a grey discocellular spot divided by the whitish veinlet; pectus pale smoky grey; tibiæ and tarsi in front blackish, barred with whitish; venter pale brown, slightly reddish. Expanse of wings, ♂ 42 millim., ♀ 49 millim.

Dharmasala: at sugar in July; a rare species.

This is one of the most puzzling species in the collection; it is therefore not surprising that it was placed with the *Noctuities* in Mr. Hocking's boxes; in many of its features it resembles them, but it appears to have more affinity to the *Limacodidæ*.

**PARASA, Walk.**

**Parasa hockingii.** (Plate CXXIV. fig. 4.)

*Parasa hockingii*, Moore, *Proc. Zool. Soc.* 1888, p. 403.

Near to *P. lepida*: base of primaries rufous brown instead of blackish, outer edge

of central green belt sigmoidal instead of nearly straight; external area paler, greyer internally; secondaries paler; thorax with a smaller central brown patch. Expanse of wings 28 millim.

“Dharmsala: at sugar in June; rare species.”

### APHENDALA, *Walk.*

#### *Aphendala fasciata.* (Plate CXXIV. fig. 6.)

*Aphendala fasciata*, *Moore, Proc. Zool. Soc.* 1888, p. 403.

Mouse-brown, with bronze reflections: primaries sericeous, crossed in the middle by a broad lilacine-greyish belt; apical border washed with the same colour; a blackish spot at the end of the cell and a few black scales scattered over the wing: body slightly yellower than the wings. Under surface sericeous grey; secondaries paler than the primaries, irrorated with black scales. Expanse of wings 31 millim.

Dharmsala.

### CANIA, *Walk.*

#### *Cania suffusa.* (Plate CXXIV. fig. 5.)

*Miresa suffusa*, *Moore, Proc. Zool. Soc.* 1888, p. 403.

Near to *C. sericea* and *C. bilinea*, but smaller than either; the primaries less silky in texture, more distinctly flesh-coloured, with only one brown line parallel to the outer margin; thorax more rosy than in either of the above. Expanse of wings 24 millim.

Dharmsala.

In this species the palpi are unusually large; so that it may eventually be separated as a distinct genus from *Cania*: the character is, however, probably only of specific value.

## DREPANULIDÆ.

### DREPANA, *Schr.*

#### *Drepana lilacina.* (Plate CXXIV. fig. 8.)

*Drepana lilacina*, *Moore, Proc. Zool. Soc.* 1888, p. 401.

Varying from silver-grey to pale straw-colour; wings crossed by two slightly divergent, straight, slender, yellow-edged, brown lines; the outer line commencing on the costa of



primaries close to the apex; costal margin of primaries ochreous; two dark brown costal spots, one at the commencement of the inner line, the other at apical third; two to five submarginal blackish dots; fringe dark brown at base and outer edge: face greyish brown; antennæ golden brown, the base of the shank steel-blue or black. Under surface deeper in colour and more sericeous than the upper surface, unmarked. Expanse of wings 33-41 millim.

Dharmasala, in September; taken at sugar.

Very closely allied to *D. japonica*; of a different tint and with narrower and deeper yellow edging to the brown lines; the primaries rather longer.

***Drepana simillima.*** (Plate CXXIV. fig. 9.)

*Drepana simillima*, Moore, *Proc. Zool. Soc.* 1888, p. 402.

Closely allied to the preceding; pale sandy buff, with paler-edged brown lines as in *D. lilacina*: primaries with similar brown costal markings; a minute oblique brown litura on the upper discocellular veinlet and a brown spot at the inferior angle of the cell: costal area of secondaries whitish: face golden brown; antennæ golden brown, the base of the shank steel-blue. Under surface pale sericeous golden brown, the primaries suffused in front with greyish; the female with a grey discal line across the wings and a small grey lunule at the end of the cell of primaries. Expanse of wings, ♂ 38 millim., ♀ 43 millim.

Dharmasala.

It is possible that this may prove to be a variety of *D. lilacina*; it was, however, kept separate by Mr. Hocking.

**AGNIDRA, Moore.**

***Agnidra violacea*, sp. n.** (Plate CXXIV. fig. 7.)

Violaceous grey; wings crossed by two divergent pale ochreous lines, the inner one of primaries transverse, angulated on the median vein, slightly sinuous below it, starting at basal fourth of costal margin and terminating at about the basal third of inner margin; outer line oblique, elbowed towards costa, crossing the disc; the lines on the secondaries are nearly straight, the inner one at basal third, the outer one just beyond the middle of the wing; costal margin of primaries ochreous; head and antennæ brown. Wings below greyer and more sericeous than above, the lines wanting; fringes brownish, tipped with testaceous; anterior coxæ whitish. Expanse of wings 39 millim.

Dharmasala.

Somewhat like the Geometrid genus *Noreia*.

**PERIDREPANA**, gen. nov.

Allied to *Drepana* and *Auzata*; the primaries less falcated than in *Drepana*; the discoidal cell of the secondaries a little more elongated; the antennæ of the male broadly plumose to the tips, as in the genus *Nyssia* amongst the *Geometrites*.

**Peridrepana hyalina.** (Plate CXXV. fig. 1.)

*Drepana hyalina*, Moore, *Proc. Zool. Soc.* 1888, p. 401.

Semitransparent white: the primaries crossed at basal third and again just beyond the middle by two parallel undulated grey lines, the outermost of these lines is dotted with little blackish dashes upon the veins from the subcostal to the median vein, and thence to the inner margin it is widened, the third line in the male is interrupted beyond the cell; a fifth black-dotted submarginal line is indicated; two black dots placed obliquely at the end of the cell, and a more or less complete marginal series at the end of the nervures; costal margin ochreous: secondaries crossed from the middle to the abdominal margin by four ill-defined undulated grey lines, the outermost one dotted with blackish; a more or less defined slender grey marginal line; two blackish dots placed obliquely at the end of the cell: antennæ pale creamy yellowish, with grey ciliation. Face, legs, and underside of costal margin of primaries pale ochraceous; veins slightly ochraceous, markings below obsolete. Expanse of wings 40-41 millim.

Kúlú, on trunks of trees in March.

The *Comibæna fenestraria* of Moore, which seems to be the *specularis* of the same author, to judge by our examples, is a Drepanulid, closely allied to *Auzata*; one example was in Mr. Hocking's collection. The genus differs from *Auzata* chiefly in the long and acutely angulated upper discocellular veinlet in the primaries, the upper radial being emitted from the angle, also in the much greater distance between the emission of the subcostal branches of the secondaries and the consequent prominence of the anterior extremity of the discoidal cell. This genus may be called *Macrauzata*.

**PROBLEPSIS**, Hübn.**Problepsis vulgaris**, sp. n. (Plate CXXV. fig. 2.)

The commonest species in the genus: snow-white, with markings somewhat as in *P. deliaria*, but the central ocelloid patches darker, more black-spotted, more brilliantly spangled with silver, a little more elongated, that of the secondaries frequently as distinct as those of the primaries; antennæ paler than in the Ceylonese species. Expanse of wings 33-34 millim.

Kangra.

This species, according to Mr. Hocking, lies flat on the exposed side of a leaf, a habit rather suggestive of affinity to the group of *Geometrites*, with which M. Guénée associated the genus; the genera *Auzata* and *Macrocilix* nevertheless seem to link *Problepsis* to the *Drepanulidæ*, of which it is certainly the most *Geometriform* genus.

## CERURIDÆ.

### DICRANURA, Latr.

#### *Dicranura himalayana*. (Plate CXXV. fig. 3.)

*Cerura himalayana*, Moore, *Proc. Zool. Soc.* 1888, p. 400.

Nearly allied to *D. menciata* of China; the black markings even more indistinct, some of them almost obsolete; the ground-colour of the wings scarcely darker than in *D. felina* of Japan; the prothorax darker, the black spots on the thorax small; the abdomen black, with white edges to the segments, dorsal, lateral, and anal tufts. Expanse of wings, ♂ 58 millim., ♀ 75 millim.

Dhamsala. Larvæ on willow.

The pattern of the wings is practically the same in all the species of the *D. vinula* group; in the present species the lines are formed as in *D. menciata*, the two deeply zigzag discal lines being much nearer together than in *D. vinula*; the third imperfect line between the above and the cell is, however, wholly wanting in *D. himalayana*.

## NOTODONTIDÆ.

### STAUIOPUS, Germ.

#### *Stauiopus berberisæ*. (Plate CXXV. fig. 4.)

*Stauiopus berberisæ*, Moore, *Proc. Zool. Soc.* 1888, p. 400.

Closely allied to *S. alternus*. The primaries darker, with a pale-edged, black, oblique, zigzag, subbasal line; discoidal spots black-edged; spots across the disc and marginal spots black, edged with white, instead of brick-red: thorax darker. Expanse of wings, ♂ 40 millim., ♀ 67 millim.

Dhamsala. Larva on *Berberis* and wild pear, July and August.

Mr. Moore records the altitude as 6200 feet.



**PERIDEA**, *Steph.***Peridea basistriga.** (Plate CXXV. figs. 5, 6.)

*Heterocampa basistriga*, *Moore, Proc. Zool. Soc.* 1888, p. 400.

♀. Closely allied to *P. sikkima*: primaries a little wider, much blacker, and with all the black markings more prominent; the yellow scaling obsolete; the central belt wider, so that its outer edge approaches nearer to the outer margin: secondaries without the reddish tinge of *P. sikkima*: thorax and abdomen corresponding in colouring with the primaries and secondaries respectively. Under surface greyer, the yellowish tinge of *P. sikkima* being absent. Expanse of wings 56 millim.

Two very worn examples of the male have the white markings on the primaries more pronounced than in the female, and the secondaries almost wholly pure white. Expanse of wings 47–49 millim.

Dharmasala; at sugar.

Said to be a rare species.

The genus *Peridea* is quite distinct from *Heterocampa* in structure, and though there is a general resemblance in pattern between the two genera, they are not even nearly allied.

**TRIÆNA**, *Hübner*.**Triæna denticulata.** (Plate CXXV. fig. 8.)

*Triæna denticulata*, *Moore, Proc. Zool. Soc.* 1888, p. 408.

Nearest to *T. furcifera* from Florida, but the narrow primaries suffused with brown, and with a black basal streak in the female connected with the “dagger” streak by an intermediate dark brown shade, a second more or less pronounced dark brown shade or streak on the radial interspaces connecting the discal denticulated black line with the outer margin, thus producing a fair copy of the primaries of *Destolmia insignis* of Japan: the secondaries, unlike those of *T. furcifera*, are pearly white, the outer half of the veins, a few marginal lunules, and a few small spots on the fringe dark brown: body grey; the thorax brownish in front. Primaries below silvery whitish, tinted on the costal half with brown; costal margin pure white, crossed by a few brown dashes: secondaries almost as above. Expanse of wings 40 millim.

Dharmasala; at sugar. Rare.

**HYBOMA**, *Hübner*.**Hyboma divisa.** (Plate CXXV. fig. 7.)

*Hyboma divisa*, *Moore, Proc. Zool. Soc.* 1888, p. 409.

Basal half and outer border of primaries whitish, clouded with smoky greyish brown; a

basal irregular longitudinal black streak, excavated in front, below the cell; three or four black costal markings and two oblique, zigzag, blackish lines from costa to inner margin across the basal third; orbicular spot outlined in black; the whole disc smoky greyish brown, bounded internally and traversed externally by two zigzag denticulated black lines; the costa black-spotted, a longitudinal black streak below the first median branch; a dentate-sinuate, submarginal, white stripe; several small black spots at external angle: secondaries pale sericeous brown, the fringe spotted with white: thorax silvery whitish, clouded with smoky brown and edged with black; abdomen pale smoky brown. Under surface sericeous whitish: costa of primaries white, spotted here and there with blackish: secondaries almost white; costal area and apex slightly browner, speckled with blackish and crossed in the middle by a short transverse blackish bar; a spot at end of cell, an arched discal series, and a series on the fringe blackish: femora black above; tibiæ and tarsi banded with black. Expanse of wings 35 millim.

Dharmasala; taken at sugar.

This species has the general coloration of *H. strigosa* of Europe, but the separation of the primaries into two distinct areas, light and dark, and the far superior size would be sufficient to distinguish it at a glance, apart from the many differences in pattern which characterize it.

*Hyboma umbrifera*. (Plate CXXVI. fig. 1.)

Pale brown: basal fourth of primaries dark cupreous brown, bounded externally by the inner black line of the central belt which occupies the central two fourths of the wing, and is bounded externally by an irregular arched and sinuated black line, acutely projected on first median interspace, below which it turns abruptly backwards and then transversely to the inner margin, so as to leave a quadrate pale patch at external angle; the lower third of the central belt to above the projecting portion blackish brown; a distinct, oblique, black dash from the costa to the reniform spot; both the discoidal spots large, pale brown with whitish margins and brown edges; the "orbicular" spot almost triangular, the "reniform" spot 8-shaped; a black spot edged with silver-grey near base of interno-median area, and an oblique, similarly-coloured dash beyond it, but below the submedian vein; a black longitudinal dash at about the middle of the external border; outer margin slenderly black; fringe white, tipped with brown: secondaries shining, with a pale cupreous lustre; basi-costal area whitish: body whitish brown, the collar traversed by a black line. Under surface of wings pale shining cupreous brown; the secondaries with an oblique dash at the end of the cell, and an arched denticulated discal stripe blackish: body below whity brown, the palpi and legs slightly testaceous. Expanse of wings 33 millim.

Dharmasala.

Mr. Hocking only obtained one specimen of this very singular and distinct species.

**PHEOSIA, Hübn.****Pheosia fasciata.** (Plate CXXV. figs. 9, 10.)

*Pheosa (sic) fasciata*, Moore, *Proc. Zool. Soc.* 1888, p. 401.

♂. Pale stramineous, sericeous: primaries darker than secondaries, edged with dark red-brown, interrupted on the costa and fringe; a narrow dark brown dash in the cell, its apex terminating on the second median branch; upper radial dark brown towards its base: secondaries with the fringe dark brown at anal angle: thorax pale ash-grey, irrorated with dark red-brown scales; abdomen greyish white; anterior tarsi barred with dark red. Under surface shining white with golden reflections; costa and fringe redder than above: pectus sprinkled with reddish hairs. Expanse of wings 39 millim.

♀. Either resembling the male or much darker, the primaries suffused with sepia-brown, clouded on costal half with darker brown, varied with whitish as follows:—a whitish interrupted band at basal fourth, a second oblique angular patch at the end of the cell, an oblique subapical streak continuous with a submarginal stripe and the inferior edges of the median branches; the veins, excepting where interrupted by the whitish bands or patches, black; this colouring being expanded into a series of prominent dashes on the disc: secondaries with a dusky border; fringe spotted and partly edged with dark brown; thorax cinereous, without reddish irroration; abdomen with two confluent dark brown spots forming an imperfect semi-circle on the basal segment. Primaries and border of secondaries below pale sepia-brown, the former with a pale arched diffused whitish band across the disc, the usual dark spots on the costa and fringe. Expanse of wings 47 millim.

Dharmasala (6200 feet). Larva feeds on cherry.

The *Rhizogramma inextricata* of Moore is nearly allied to the genus *Callenia*, but has much elongated palpi with naked terminal joint (*Callenia saga* from Japan is probably identical though slightly darker): the genus may be called *Euscotia*.

## CYMATOPHORIDÆ.

**HABROSYNE, Hübn.****Habrosyne fraterna.** (Plate CXXV. fig. 11.)

*Habrosyne fraterna*, Moore, *Proc. Zool. Soc.* 1888, p. 406.

Closely allied to *H. derasa* of Europe, slightly larger and duller in colouring: primaries with the white subbasal costal patch (commencing the two ordinary divergent white lines) and the grey patch below it as broad and prominent as in *H. scripta* of the United States; central area bronze-brown instead of ochraceous; the parallel discal lines dark brown and



less acutely crinkled ; the white submarginal line less prominent, and the border a little paler : secondaries slightly paler : prothorax less rufous. Expanse of wings 44-47 millim.

Dharmasala ; July.

This species will stand between *H. derasa* and *H. indica* ; in colouring, though not in marking, it is nearer to the latter.

#### THYATIRA, Hübn.

*Thyatira batis*, var. *cognata*. (Plate CXXV. fig. 12.)

*Thyatira cognata*, Moore, *Proc. Zool. Soc.* 1888, p. 406.

A little duller than typical *T. batis*, and with the central dorsal spot of the primaries obsolete, giving the insect nearly the character of *T. vicina* of Java ; secondaries darker than in most examples of *T. batis*. Expanse of wings 40-45 millim.

Dharmasala.

“ At sugar, and from larvæ on raspberry ; the larvæ found 16th June, pupæ 20th. A curiously twisting larva.”

Although Mr. Hocking's collection contained six examples of this form, all differing from the European type in the above noted characters, there was also one example of the normal pattern and coloration, showing that although *T. cognata* is the prevalent form at Dharmasala, it is not at present a constant and therefore distinct species.

#### POLYPLOCA, Hübn.

*Polyploca orbicularis*. (Plate CXXVI. fig. 2.)

*Palimpsestis orbicularis*, Moore, *Proc. Zool. Soc.* 1888, p. 407.

Nearly allied to *P. flavicornis* of Europe, but much browner ; the wings more sericeous ; the inner black line of the central belt of primaries more angular, the four lines across the basal area better defined and more irregular ; the discoidal spots smaller and better defined ; the secondaries darker and more uniformly coloured ; the collar frequently reddish. Under surface darker and more uniformly coloured. Expanse of wings 41-43 millim.

Dharmasala ; at sugar.

“ Very like *Thyatira (batis, var. cognata)* in its movements and manner of flight.”

The genus *Polyploca* was founded by Hübner for the reception of the single species *P. xanthoceros*=*ridens*, Fabr. ; it only differs from *Palimpsestis*, subsequently described by the same author, in the narrower primaries of all the species.

**Polyploca albidisca.** (Plate CXXVI. fig. 3.)

*Palimpsestis albidisca*, Warren, *Proc. Zool. Soc.* 1888, p. 299.

General aspect and coloration of *P. ocularis*. Primaries grey, varied with pale reddish brown, crossed by eleven sinuous lines, the fourth and part of the sixth black, the others dark grey; a black basal patch, crossed by an oblique interrupted white dash; the interval between the first and second lines whitish on costa and at inner margin; the interval between the fourth and sixth lines white from the median vein to the inner margin; the interval between the ninth and tenth lines whitish at its extremities; a submarginal series of blackish lunules with pale edges; marginal line lunulated, black; fringe grey, with a whity-brown basal line and a silvery-white edge: secondaries pale sericeous grey, with brown external border; costa whitish; fringe as in primaries: head and prothorax whity brown, sprinkled with little black lines, remainder of body almost white. Under surface very like that of the preceding species. Expanse of wings 38 millim.

♀, Dharmsala; at sugar, in October.

A second female of this species was obtained by Major Yerbury at Berham Gulley, Campbellpore, in September.

**Polyploca renalis.** (Plate CXXVI. fig. 4.)

*Palimpsestis renalis*, Moore, *Proc. Zool. Soc.* 1888, p. 407.

Most like *P. ocularis*. Primaries grey, tinted with rose-pink; a basi-costal whitish patch, below which is a black and grey <-shaped marking; three or four slightly oblique, irregular dark grey lines, followed by the black inner line of the central belt, this line is irregularly undulated; central belt whitish, enclosing a v-shaped, alternately black and orange marking in place of the reniform stigma; outer line of central belt black, irregularly sinuated and unequally biangulated; four imperfect irregular discal lines, blackish at their extremities; outer border dark grey, tapering to apex and inner angle, and bounded internally by an undulated black line; a submarginal series of black dots; fringe whity brown flecked with blackish: secondaries dark bronze-brown, with the costa pale; fringe whitish, traversed by a grey stripe: head whitish or white, barred with black; antennæ ochraceous; thorax whitish varied with rufous brown; a brown line in front, crossing the base of the tegulæ; abdomen silvery brownish grey. Under surface similar to the preceding species. Expanse of wings 40 millim.

♀, Dharmsala; at sugar.

A worn example of this species was confounded with the series of *P. orbicularis*.

## LEUCANIIDÆ.

**ALETIA**, *Hübner*.**Aletia exanthemata.** (Plate CXXVI. fig. 6.)

*Aletia exanthemata*, *Moore, Proc. Zool. Soc.* 1888, p. 410.

Nearest to *A. vitellina* of Europe; a little deeper in colouring: the secondaries more suffused with brown; the two lines limiting the central belt closer together and much less angular; an additional oblique line beyond the central belt, its upper extremity uniting with the submarginal line on the last subcostal branch; the submarginal line more distinctly undulated; all the lines dotted with black upon the veins; a marginal series of black dots: collar of the male traversed by a blackish line. Expanse of wings, ♂ 35 millim., ♀ 40 millim.

Dharmasala; at sugar, July and August.

**Aletia rudis.** (Plate CXXVI. figs. 7, 8.)

*Aletia rudis*, *Moore, Proc. Zool. Soc.* 1888, p. 411.

Closely allied to *A. lithargyria* of Europe; both sexes coloured like the female of that species, but without a trace of the dark transverse lines indicating the limits of the central belt of the primaries, but with a series of small black lunules across the disc; the whole surface of these wings being, moreover, more or less distinctly transversely striated with ochreous; secondaries greyer. Expanse of wings, ♂ 37 millim., ♀ 41 millim.

Dharmasala; at sugar.

**Aletia fraterna.** (Plate CXXVI. fig. 9.)

*Aletia fraterna*, *Moore, Proc. Zool. Soc.* 1888, p. 410.

Near to *A. lithargyria*; rather larger and more pink in colouring; the primaries without the ordinary lines or black dots, but striated as in the preceding species; the veins and costal margin white. Expanse of wings 48 millim.

Dharmasala; at sugar.

It is possible that *A. fraterna* (the unique specimen of which was associated by Mr. Hocking with *A. albicosta* of the same author) may turn out to be nothing more than a well-marked variety of *A. albicosta*: it differs, nevertheless, in the absence of the orange markings and black dots on the primaries, and in its generally more rosy coloration, in which characters it more nearly approaches *A. rudis*.



**LEUCANIA, Hübn.****Leucania percisa.** (Plate CXXVI. figs. 10, 11.)

*Leucania percisa*, Moore, *Proc. Zool. Soc.* 1888, p. 410.

Near to *L. straminea* of Europe and still nearer to *L. venalba* of India. It differs from the latter in its slightly longer primaries, the costal border of which is of the clear sericeous whity-brown tint of the submedian area, instead of being greyish as in *L. venalba*; in the more ivory-white median vein with its third branch and the much darker shade enclosing them: the secondaries more or less clouded with grey, especially at the outer margin, but usually without the black marginal dots of *L. venalba*; the fringe in dark males traversed by a dusky stripe. Expanse of wings 36–38 millim.

♂ ♀, Dharmasala; at sugar in July.

It seems a little doubtful whether this is really a distinct species from *L. venalba*; but as Mr. Hocking only obtained one example of the latter, the question must at present remain unsettled; a longer series might render the separation of the two forms impossible, as in the case of *L. l-album*, *penicillata*, and *bistrigata*.

**Leucania irrorata.** (Plate CXXVI. fig. 12.)

*Leucania irrorata*, Moore, *Proc. Zool. Soc.* 1888, p. 409.

Primaries sericeous whity brown, irrorated with fine black scales; a short longitudinal blackish basal line below the median vein, a black spot at the end of the cell followed by two or three small irregular blackish markings; the end of median vein and commencement of its third branch white; a marginal series of black dots: secondaries sericeous silvery grey with faint golden reflections; veins and margin dusky; fringe yellowish at base, traversed by a grey stripe and tipped with silvery white: thorax whity brown; palpi blackish at the sides; collar traversed by three squamose blackish lines; abdomen greyish. Wings below silvery white, the primaries strongly and the secondaries slightly tinted with brassy yellow; costal borders irrorated with black; a marginal series of black dots: body below whity brown, slightly greyish. Expanse of wings 38 millim.

Dharmasala.

**Leucania bifasciata.** (Plate CXXVI. fig. 13.)

*Leucania bifasciata*, Moore, *Proc. Zool. Soc.* 1888, p. 410.

Primaries sericeous reddish clay-colour, washed with purplish lake in the discoidal cell, which is flanked in front and behind by a broad streak of cream-colour; outer half of median vein and veins on the disc slenderly pure white, the basal half of the median vein and a longitudinal streak curving upwards to near apex grey; a black dot at the inferior angle of

the cell; a transverse series of short elongated blackish dots on the veins; fringe grey, sericeous, shot with pink: secondaries pale brownish grey, silvery on costa; fringe whitish, traversed by a grey stripe; margin and fringe tinted with pink: body white; head, collar, and anus slightly greyish, edged with pink; the collar traversed by two dark grey lines. Primaries below shining rosy whitish, the discoidal area, excepting the median streak, blackish, the internal borders white; fringe dark grey: secondaries shining white; costal and apical areas pink irrorated with black; fringe tinted with pink at apex: body below dull flesh-pink. Expanse of wings 35 millim.

Dharmasala; at sugar.

#### TYMPANISTES, Moore.

*Tympanistes rubidorsalis*. (Plate CXXVI. fig. 5.)

*Tympanistes rubidorsalis*, Moore, *Proc. Zool. Soc.* 1888, p. 409.

Nearly allied to *T. pallida*: primaries broader, with more angulated outer margin, pale yellowish brown irrorated with dark brown, sericeous, more or less tinted with pink, thinly scaled; a brown annulus at the end of the cell and two very faintly indicated, irregularly sinuated, grey lines representing the central belt: secondaries white, transparent, with rosy abdominal area: head and thorax whity brown; abdomen rose-red, with the margins of the posterior segments and the sides pure white. Under surface white; wings sericeous, pearly; tarsi brownish. Expanse of wings 50 millim.

Dharmasala; at sugar.

“Makes a noise like a small policeman’s rattle.”

#### XYLOPHASIIDÆ.

##### XYLOPHASIA, Steph.

*Xylophasia repetita*. (Plate CXXVII. figs. 1, 2.)

Allied to *X. hepatica* of England, redder, the black markings replaced by red-brown; the reniform spot blackish with a pale border; the pale subbasal stripe of the primaries crossing the wing, not interrupted by a blackish internal patch as in *X. hepatica*; the outlines of the central belt more oblique; the submarginal pale stripe indistinct, bounded internally by a complete series of red-brown spots in pairs and followed by a series of longitudinal blackish dashes instead of the black marginal spots: secondaries gradually darker from the middle to the outer margin, but with no defined external border; a series of dusky marginal lunules followed by a pale tawny line at the base of the fringe. Female like the male, or else almost exactly like *X. lateritia* of Europe. Expanse of wings 42–50 millim.

Dharmasala; at sugar in July: a rare species.

## NEURIA, Guén.

*Neuria auripicta*. (Plate CXXVII. fig. 3.)

Nearest to *N. incisa*: primaries sepia-brown, tinted with slaty grey on costal border and most of the veins and varied with black patches and spots between the veins somewhat as in *N. saponariæ*; a line across the base, a narrow interrupted stripe across the basal fourth, a broad internal streak, the outlines of the discoidal spots, several costal dots, an oblique conical spot (enclosing a few dusky scales), a submarginal stripe, acutely angulated close to external angle, and two narrow undulated lines on the fringe, golden yellow; the median vein and a streak along its first branch silvery white: secondaries sericeous pale brown, with a darker discal arched line and diffused external border; fringe yellow at base, white externally and traversed by a central series of dusky lunules: body similar to the allied "*Heliophobus*" *dissectus* of Walker, but the thorax much blacker. Under surface darker and better marked than in any other species. Expanse of wings 40 millim.

Dharmasala; at sugar in July.

## APAMEIDÆ.

## MAMESTRA, Ochs.

*Mamestra terranea*. (Plate CXXVII. fig. 10.)

Nearest to *M. brassicæ*, having the same general coloration; smaller, the wings tinted with lilac in certain lights; all the lines across the primaries decidedly less irregular; the black lines limiting the central belt bordered with pale brown lunules; the denticles of the outer line extending along the veins and spotted with white; the orbicular spot larger and with angular outer edge, the reniform spot terminating in two clear white dots as in most examples of *M. brassicæ*, but neither of the discoidal spots pale-bordered; the submarginal line grey instead of white; the marginal black spots small. Wings below with two parallel externo-discal dark grey lines parallel to the outer border. Expanse of wings 43 millim.

Dharmasala; taken at sugar.

Three examples only were in Mr. Hocking's collection.



## NOCTUIDÆ.

## TIRACOLA, Moore.

*Tiracola violacea*. (Plate CXXVII. fig. 5.) •

General aspect of a *Graphiphora*, but with broader wings and quite different pattern; nearest to *T. spectabilis* from Australia, the pattern quite the same: primaries shining dark violet grey with cupreous reflections; the discocellular patch and hastate discal spots chocolate-brown; lines of the central belt grey, indistinct, the black dots terminating the denticles sharply defined; the white costal dots sordid, but that at origin of lower radial vein pure and distinct: secondaries deep shining bronze-brown; basi-costal area shining, brassy; fringe pale, with a grey central band: thorax purplish brown; abdomen grey-brown, anal tuft golden brown. Underside shining smoky greyish brown with golden reflections; a grey line, darkest on secondaries, across the disc; secondaries with reddish costal area. Expanse of wings 58 millim.

Dharmasala; at sugar: rare.

Three examples were obtained, but only one in good condition.

## SPÆLOTIS, Boisd.

*Spælotis ambigua*. (Plate CXXVIII. figs. 10, 11.)

Closely allied to *S. "Graphiphora" valida* (the Japanese representative of *S. ravidia* \*); of the same size; the primaries slightly more sericeous and without the black dart-like marking; the secondaries bronze-brown, nearly as dark as the primaries; thorax rather darker than in *S. valida*. Expanse of wings 42-48 millim.

Dharmasala; at sugar.

A beautiful variety occurs in which the primaries are rosy, flecked with dark brown; the ordinary markings for the most part yellowish white; the thorax yellowish in front, inclining to sienna-red behind, and with the black and grey lines consequently strongly defined.

## CHERSOTIS, Boisd.

*Chersotis nivisparsa*. (Plate CXXVII. fig. 11.)

♀. Nearest to *C. multangula*; similar in pattern, excepting that the denticulation of the outer line of the central belt is more pronounced: ground-colour of primaries similar,

\* The *Agrotis cilis* of Staudinger is probably the same thing poorly figured.

but all the veins sprinkled with white scales; the discoidal spots larger, their margins partly yellow, forming the characters **Q K**; submarginal spots also yellow: secondaries darker and more sericeous than in *C. multangula*. Costal borders of wings below whitish, irrorated with black scales; a dusky discal stripe across all the wings; primaries with a diffused dusky submarginal band followed by a whitish-speckled border and a marginal series of black lituræ; fringe whitish, with a dusky central stripe: body fuliginous brown; tarsi above black, with pale ochraceous bands. Expanse of wings 39 millim.

Dharmasala; at sugar.

### TRIPHÆNOPSIS, *Butl.*

#### *Triphænopsis inepta*. (Plate CXXVII. figs. 6, 7.)

Allied to *T. lucilla* of Japan: primaries with the same pattern, but entirely different colouring, purplish grey, slightly suffused with golden brown beyond the central belt; the black markings less prominent than in *T. lucilla*, the central belt dark throughout, the reniform spot whitish brown, clouded with grey in the male, white in the female: secondaries paler than in *T. lucilla*, the central patch pale stramineous, much larger and traversed externally by a badly-defined brown line; fringe stramineous, flecked with brown: thorax of male smoky grey, palest behind the collar; abdomen pale dust-grey, with dark dorsal tufts and rufous-brown anal tuft: entire body of female sordid whitish. Under surface paler throughout than in *T. lucilla*, the blackish belt of secondaries reduced to a submarginal stripe. Expanse of wings, ♂ 44 millim., ♀ 43 millim.

Dharmasala; at sugar in October.

#### *Triphænopsis diminuta*. (Plate CXXVII. figs. 8, 9.)

On the upper surface almost exactly like the preceding species in colour and marking, but much smaller; the central belt rather narrower below the middle and the head and thorax uniformly paler than in males of *T. inepta*: on the under surface the primaries and the submarginal band of secondaries are blacker, throwing the paler portions of the wings into bolder relief; the cell of the secondaries is considerably longer and the discocellular black spot consequently farther from the base; lastly, the discal blackish lunulated line is invariably absent. Expanse of wings 32-37 millim.

Dharmasala; at sugar.

Extremely like the preceding; but nevertheless rightly regarded by Mr. Hocking as a distinct species. Six examples were obtained, varying a little *inter se*, yet agreeing in the characters noted above; one very much worn male has the reniform spot white as in the female of *T. inepta*.

TRIPHÆNA, *Ochs.**Triphæna fuscicollis.* (Plate CXXVII. fig. 4.)

Nearest to *T. fimbria*. The primaries a little broader, pale reddish clay-coloured; the costa and basal two thirds smeared with brassy bronze, two divergent slender grey lines limiting the central area, the inner line oblique, the outer transverse, slightly incurved towards costa; a rounded black spot at the posterior fourth of the outer line; a marginal series of blackish dots and a slender undulated deep ochreous line at base of fringe: secondaries bright ochreous, basi-costal area brassy; a zigzag abbreviated black band running obliquely from the second subcostal to the submedian vein; a tapering series of six subconfluent black spots close to outer margin from first subcostal to first median branch: head and collar deep chocolate-brown; thorax grey, shining; abdomen testaceous, with greyish lateral and anal tufts. Wings below ochreous, the costal and external areas suffused with brownish grey: primaries with a broad triangular blackish patch forming a broad belt, with straight outer edge, from costal vein to near the inner margin; marginal dots and fringe as above: secondaries with a black dot at end of cell and a black band as above, but continued as a straight tapering stripe to costal vein; fringe grey, with a yellow basal line: body below brownish grey. Expanse of wings 55 millim.

Dharmasala; at sugar in July.

"A very rare species. The only pair taken in three years' pretty constant sugaring in the same place and thirteen years' collecting in the district."—*Hocking*.

*T. fuscicollis* is the only species of the genus which has the head and collar deep brown and in which the band of the secondaries does not form a broad external border.

## ORTHOSIIDÆ.

SEMIOPHORA, *Steph.**Semiophora orthosioides.* (Plate CXXVIII. fig. 1.)

Upperside smoky cinereous; pattern very similar to *Orthosia lota* of Europe, excepting that the submarginal whitish line is still more regular and, instead of having a red inner edging, shows only three or four small spots of this colour at intervals; the fringe also is considerably wider, the thorax darker and the abdomen paler. The colouring in many examples is much paler than in the type and resembles that of *Orthosia kindermanni*, but still with the same straight submarginal whitish line edged with red spots. The under surface, again, resembles that of *O. lota*. Expanse of wings 29 millim.

Mundi; at sugar in March.

Evidently a common species.



## ANCHOCELIS, Guén.

*Anchocelis tenuis*. (Plate CXXVII. fig. 12.)

Colouring of *A. carneago*: primaries coffee-coloured, washed with sericeous pinky lilacine excepting between the discoidal spots, where there is a darker dull patch of coffee-colour; the discoidal spots themselves quite normal in form, of the same colour as the ground-tint; lines of the central belt ill-defined; submarginal line macular, well marked from the costa to the third median branch; fringe dull coffee-coloured: secondaries pink with a pale golden gloss; fringe foxy red, with pale basal line: thorax dull chocolate-coloured; antennæ with whitish shank; abdomen pale brown, with foxy-red lateral and terminal tufts. Wings below with foxy-red borders; remainder of primaries grey with cupreous gloss, of secondaries whitish with golden gloss; indications of two discal lines; secondaries with a dusky discocellular dot: body below foxy red. Expanse of wings 38 millim.

Laka; taken at light in June.

## XESTIA, Hübn.

*Xestia melonina*. (Plate CXXVIII. fig. 7.)

Primaries above bright ochreous, crossed by seven slender dark rufous-brown lines; the first four in pairs across the basal third, the fifth more strongly defined, almost central, trisinuated, with the middle sinuation deepest, the sixth and seventh subangulated, almost parallel, crossing the disc, bounded externally by pale lunulated stripes; discoidal spots pale; a brownish-ferruginous spot between them bounded by the central line; an ill-defined ferruginous band bounded externally by each of the discal lines and a less-defined squamose submarginal streak; a dark brown undulated marginal line; fringe tipped with ferruginous: secondaries paler and more sericeous than the primaries, the costa silvery; an abbreviated purplish-brown central line from median vein to abdominal margin; a streak above the latter and a second submarginal streak; fringe darker ochreous: thorax deep ochreous, with the shoulders and a stripe across the back of the tegulæ purplish brown; abdomen paler, sprinkled with brown scales; anal tuft bright ochreous. Under surface uniform pale shining ochreous; wings crossed by three more or less interrupted irregular brown lines; pectus deep ochreous in front. Expanse of wings 43-48 millim.

Dharmasala; taken at sugar.

More nearly allied to *X. ochreago* than to any other species; but in colouring much more like *Xanthia citrago*.

## COSMIIDÆ.

COSMIA, *Ochs.**Cosmia albipennis.* (Plate CXXVII. fig. 13.)

Nearest to *C. trapezina*: primaries with the same arrangement of lines, pale vinous brown, the "orbicular" spot slightly paler, oblique, slenderly outlined in dark brown, a similar spot between the latter and the base; a small blackish annulus below the "orbicular" spot; outer half of the central belt darker brown, especially towards costa, including the reniform spot, which is outlined in blackish brown; inner line of central belt oblique, slightly irregular, slender, but commencing in a black costal spot; central line strongly defined, especially at costa, oblique, elbowed on interno-median interspace; outer line strongly defined, subangulated; an interrupted abbreviated black subbasal dash from costa almost to submedian vein; a well-defined slightly undulated submarginal line, shaded internally with dark brown, from upper radial vein to costa; the costal margin above this shade blackish brown, interrupted by three pale dots; a slender blackish marginal line: secondaries of male creamy white, the fringe towards apex usually tinted with vinous brown, of female grey, with pale fringe; basicostal area silvery: body pale vinous brown; abdomen of female grey, with vinous lateral and anal tufts. Under surface of wings creamy whitish, with the costal and apical areas more or less suffused with red; the centre of the primaries, especially in the female, suffused with grey; discocellular dots and discal line much as in *C. trapezina*: pectus and venter of female more or less red, venter of male whitish. Expanse of wings 37–38 millim.

Dharmasala; at sugar: rare.

Although structurally a *Cosmia*, and not much unlike *C. trapezina* in pattern, the form of the wings in this species reminds one rather of *Teniocampa*. The white secondaries of the male are characteristic, somewhat resembling *T. miniosa*.

## HADENIDÆ.

DIANTHÆCIA, *Boisd.**Dianthæcia nivescens.* (Plate CXXVIII. fig. 2.)

Closely allied to *D. auroviridis*, from which it may at once be distinguished by the silvery-white instead of whitish lines on the primaries, the more oblique and white costal dashes, the pure white spots in place of the minute angular whitish dashes in the cell, the large diffused bluish-edged white spot immediately beyond the cell, a pure white triangular spot below the latter, a squamose white apical streak, and the white edges to the marginal black spots. On

the underside the primaries are greyer without the pinkish costal suffusion; the discocellular blackish spot is bounded on both sides by whitish spots, and the discal stripe is more arched: the secondaries are considerably whiter, without pinkish costal suffusion, and the discal stripe is further from the outer margin. Expanse of wings 31 millim.

Dharmasala; at sugar.

#### EPUNDA, Dup.

*Epunda mamestrina*. (Plate CXXVIII. fig. 5.)

Allied to *E. nigra*, of the same form and pattern, but in colouring more like *Valeria oleagina*: primaries smoky grey, with black lines as in *E. nigra*; the costa varied with whitish spots to the end of the cell, and with three white dots beyond it; reniform spot white, black-edged and with greyish inner streak; the dashes at the extremity of the denticles along the outer edge of the central belt dotted with white; a submarginal series of black spots enclosing white crescents; fringe dotted with white; a bright yellow spot terminating the black-edged abbreviated subbasal stripe: secondaries more sordid than in *E. nigra*, all the veins, border, and submarginal stripe being more decidedly smoky grey: body dark smoky grey; the thorax also irrorated with black. Under surface rather darker than in *E. nigra*, with a decided dark grey discal line through all the wings: primaries without discocellular spot: secondaries with black discocellular lunule. Expanse of wings 49 millim.

Dharmasala.

#### CANNA, Walk.\*

*Canna splendens*. (Plate CXXVIII. fig. 4.)

*Canna splendens*, Moore, *Proc. Zool. Soc.* 1888, p. 412.

Allied to *C. pulchripicta*; the green markings bluer, bordered with silver and edged with black; the green spot near base of inner margin larger, and bounded internally by a quadrate black spot enclosing a white dot; the base itself white; the angular brown band broader, more irregular, more olivaceous, varied with black and green; a pure white dash at the end of the cell; the olivaceous stripe from the elbow of the brown band to the costa widened and diffused; apex blue-green, bounded internally by a white line; the brown ocelloid spots replaced by white-edged black spots with white pupils, but followed by brown spots on the fringe; the remainder of the fringe is green, tipped here and there with brown: secondaries pearly white, external border bronzy grey, widest towards apex, tapering to a mere line at external angle; centre of external margin pale; fringe white: head green, white between the

\* Incorrectly placed in the Acontiidae by Walker; it is doubtful whether it is distinct from the European genus *Jaspidea*.



antennæ; collar green, margined with white and rufous brown on the shoulders; remainder of thorax pale rufous brown, edged behind with dark brown; abdomen whitish, with one or two triangular black dorsal tufts. Primaries below with the basi-internal half sericeous greenish white; the subapical area grey, with bronze reflections; the costal border pale sandy buff, with three subapical white costal dots; a white dash at the end of the cell; external border and fringe white, interrupted by two brown spots; the outer margin and edge of fringe dotted with black: secondaries sericeous white; costal border brownish irrorated with black; external border grey, with bronze reflections and traces of two parallel darker lines; a marginal series of black dots; fringe white: body below whitish brown; tibiæ green in front, anterior femora and tarsi of all the legs black, the tarsi spotted with white. Expanse of wings 37 millim.

Dharmasala; at sugar from July to September.

#### HADENA, Schr.

*Hadena lubrica*. (Plate CXXVIII. fig. 9.)

Allied to *H. saportæ* of Europe; larger and granite-grey; the rufous markings absent, the pale patch below the discoidal spots much whiter; the submarginal grey band wider. Under surface altogether of a much more silvery shining grey colour. Expanse of wings 44 millim.

Dharmasala.

#### KARANA, Moore.

*Karana similis*. (Plate CXXVIII. fig. 8.)

Nearly allied to *K. gemmifera* and *K. latevirens*\*, but differs constantly in the form of the transverse silver band, the central loop of which is much shorter in front and has a decidedly longer termination behind the band; the golden-green markings are fewer and less prominent, but the disc is crossed by a distinct sinuous lunulated silver-greyish stripe; the submarginal golden spots are elongated so as to enclose the series of black spots, of which, in *K. gemmifera*, they form the anterior margins. Expanse of wings 39 millim.

Dharmasala; at sugar in August.

Said to be a rare species. Four specimens were obtained.

\* *Diptera latevirens*, Oberth. Etudes, x. pl. ii. fig. 6. It differs only from *K. gemmifera* in its brown secondaries; probably not a constant character.

## ACONTIIDÆ.

ACONTIA, *Ochs.**Acontia plebeia.* (Plate CXXIX. fig. 3.)

Fuliginous brown: primaries with the basal third dull whitish, sprinkled with testaceous and brown scales, bounded in the centre of its outer edge by a bisinuated blackish marking; reniform spot whitish, with black margin and central brownish litura; an ochreous spot beyond it, and above the latter a cuneiform costal patch; submarginal and marginal series of blackish spots and a white-edged blackish stripe on the fringe: secondaries uniformly coloured, with the fringe white, traversed by a blackish stripe and tipped with blackish: body whitish. Under surface greyish brown, with golden reflections, mottled and irrorated with whitish; a slender interrupted black marginal line; fringe as above: primaries with ochreous costal margin: palpi and collar ochraceous. Expanse of wings 22 millim.

Dharmasala.

*Acontia plumbata.* (Plate CXXIX. fig. 4.)

Primaries pale golden stramineous; the basal two sevenths of the costal border leaden grey, opposite to the extremity of which is a fragment of a black-edged pink stripe shot with leaden grey and representing the inner line of the central belt; the outer line represented by a complete angulated and undulated stripe of the same character, from which an oblique dusky streak runs to apex; an almost marginal irregular leaden-grey streak; three or four costal grey dots towards apex; a series of short black dashes along the outer margin; fringe whity brown glossed with gold, traversed by a black-edged greyish stripe and edged with grey: secondaries pale dead golden; fringe pale yellow at base, with a central grey stripe and white outer edge: body pale golden stramineous; head, collar, and anus testaceous. Under surface creamy whitish, with golden reflections: primaries broadly suffused with grey; indications of a postmedian discal grey stripe followed on the costa by grey spots as above; a marginal series of blackish spots; fringe paler than above: secondaries irrorated with grey; a brownish discocellular spot and angulated discal stripe; a slender interrupted black marginal line; fringe with a grey central stripe and outer edge: tarsi banded above with grey. Expanse of wings 23 millim.

Dharmasala; taken by beating.

*Acontia excisa.* (Plate CXXIX. figs. 5, 6.)

Nearest to *A. signifera*=*subfixa*; smaller: the base of primaries rather broadly sepia-

brown, with partly black-edged undulated boundary followed by three grey dashes indicating an irregular transverse line; central belt more uniform in width and less irregular than in *A. signifera*, cupreous-brown varied with leaden grey and black instead of pale olivaceous and grey; the reniform stigma smaller, transverse oblong, black or grey with a white edge; the white band beyond the central belt continuous, enclosing a sinuous grey line, this band in the male is very narrow, but in the female broad,—consequently the discal belt, which in the male is broad and of the same colours as the central belt, is restricted in the female and forms a zigzag grey band; external border grey, bounded internally by a zigzag white line; a marginal series of black or grey dots, more or less edged with white; fringe white at apex, otherwise metallic leaden grey, with paler stripes in certain lights: secondaries pale shining brownish grey; fringe silvery grey. Under surface leaden grey in the male, pale shining brown in the female: primaries with a costal spot and the apex whitish or yellowish; abdominal half of secondaries whitish; male with marginal black dots. Expanse of wings, ♂ 16 millim., ♀ 17 millim.

Dharmasala.

*Acontia picata*. (Plate CXXIX. fig. 2.)

Primaries above pure white; a spot close to base of costa; an almost central belt with black W-shaped inner edge and irregular furcate outer edge partly enclosing two spots to represent the reniform stigma; a small dot on the costa above the latter, an irregular apical patch, another near centre of external area varied with black, and a few scattered squamose spots olivaceous brown; two costal dots and an oblique dash on the apical patch white; a golden-brown marginal line; fringe spotted and mottled with grey: secondaries silvery grey; fringe yellowish at base: thorax and basal two fifths white, remainder of abdomen pale brown, with two black dorsal tufts; anterior tibiæ and tarsi above banded with black and yellow. Under surface creamy whitish: wings sericeous with golden reflections; primaries partly suffused with grey; basal two thirds of costa blackish, varied with ochreous and sprinkled with white, terminated by an angular white marking; remainder of costa ochreous; costal fringe spotted with black; faint greyish indications of two stripes representing a central belt, and a greyish spot at the end of the cell; outer border white, excepting at apex; a marginal series of black dashes; fringe grey, the base ochreous, the centre enclosing two imperfect white lines, the outer edge varied with black and white spots: secondaries with grey-speckled costal third; the basal third of costal border yellowish: a spot at the end of the cell and an arched discal line dark grey; a marginal series of slender blackish lituræ; fringe rather paler than in the primaries: palpi blackish at the sides. Expanse of wings 21 millim.

Dharmasala.

“Found on rocks and in roadside cuttings; cocoon of dry earth.” *A. picata* comes nearest to *A. signifera*, but is a larger and more boldly marked species.



**Acontia tegulata.** (Plate CXXIX. fig. 1.)

Primaries shining white, a broad dark brown central belt, increasing in width from costal to inner margin, its inner edge bounded by a slightly undulated black line, its outer edge emitting an irregular streak from the middle almost to the costa; this streak is more or less confluent with an irregularly cuneiform external patch or border; three subapical costal dark brown dots (sometimes absent) connected, by a diffused ochraceous spot, with the external patch; fringe pale brown, traversed by two darker brown lines: secondaries sericeous whitish brown, darkest towards outer margin; fringe pale stramineous, sometimes traversed by a grey line: thorax and base of abdomen shining white, anal extremity pale ochraceous. Under surface shining, pale brassy brown, costal borders with golden reflections: costa of primaries ochraceous, flecked with dark grey towards apex; fringes of all the wings with lines as above: secondaries with the costal area irrorated with dark grey; a grey discocellular spot: body below yellowish. Expanse of wings 20 millim.

Dharmasala.

Nearest to *A. quadripartita*.

**BANKIA, Guén.****Bankia obliqua.** (Plate CXXIX. fig. 7.)

Primaries above with the basal third white; external two thirds dull copper-brown, crossed obliquely from costa to external angle by a white stripe; costal margin towards the base brownish; four whitish costal dots towards apex; a whitish line at the base of the fringe: secondaries pale sericeous greyish brown; fringe white, traversed by two brownish lines: head, collar, and antennæ pale sandy brown, the collar margined with white; thorax and abdomen silvery whitish; anal tuft and claspers testaceous. Under surface silvery whitish. Expanse of wings 18 millim.

Dharmasala.

**ERASTRIIDÆ.****ERASTRIA, Ochs.****Erastria unduligera.** (Plate CXXIX. fig. 9.)

Fuliginous brown: primaries suffused with lilac; basal third irregularly marked with black-edged spots and bounded by two parallel undulated black-lines, the interval between which is somewhat silvery; discoidal cell blackish, with the ordinary spots shining lilacine

grey, with pale edges spotted with ochreous; two pale zigzag discal lines; costal margin black spotted with ochreous; a marginal series of ochreous-edged black dots: secondaries shot with cupreous; fringe grey, with a whitish basal line: head and abdomen ochreous; collar and thorax dark fuliginous brown, with a transverse white bar on the metathorax. Wings below grey with golden reflections, irrorated with white; costal margin of primaries ochreous spotted with black: body below pale ochreous; tarsi banded above with black. Expanse of wings 17 millim.

Dharmasala.

## ANTHOPHILIDÆ.

### HYDRELIA, Guén.

#### *Hydrelia auripalpis.* (Plate CXXIX. fig. 8.)

Primaries dull chocolate-brown, traversed by four series of white dots, the first and third of which represent the outlines of the central belt; the second dots of the second and fourth series attached to small black spots; four yellowish costal dots beyond the cell; fringe traversed by two dusky lines: secondaries greyish brown; fringe slightly golden: body purplish brown; head and collar brownish testaceous; palpi, front legs, and tibiæ of second pair of legs bright saffron-yellow; pectus grey; remainder of under surface shining brown. Expanse of wings 18 millim.

Dharmasala.

#### *Hydrelia opalescens.* (Plate CXXIX. fig. 10.)

Allied to the preceding species; larger: the primaries more acuminate; pale coffee-brown washed with lilac, the belt enclosed between the ordinary lines paler and therefore showing the lilac tint more perfectly; a short comma-like costal dash near the base; a widely zigzag line commencing at basal third of costa and terminating before the middle of inner margin; a second line commencing obliquely before the middle of costal margin, then turning and following the subcostal vein almost to apex, then curved downwards, forming an elbow above upper radial vein and returning obliquely to just beyond the middle of inner margin; lastly, a submarginal series of points, all pale lilac; reniform stigma represented by two small black-centred lilac spots, almost forming a figure 8; a black apical spot; fringe with a tawny basal and a whitish subterminal line: secondaries whitish, with greyish diffused external border and golden-testaceous fringe: thorax bright coffee-red; abdomen opaline grey, with coffee-coloured crest; palpi bright saffron-yellow, legs paler. Primaries below cupreous brown, costal border golden, inner border dead white; fringe as above: secondaries with the apical

half ochraceous, speckled with testaceous, abdominal half white; a spot at end of cell and an arched disco-costal stripe testaceous; pectus silvery, venter pearly white. Expanse of wings 20 millim.

Dharmasala.

### LEPTOSIA, Guén.

#### *Leptosia contingens*. (Plate CXXIX. fig. 13.)

*Metachrostis contingens*, Moore, *Proc. Zool. Soc.* 1888, p. 412.

Closely allied to *L. velox*; the primaries with straighter costal and shorter inner margin, so that they appear narrower; on the upper surface the dark lines are broader and more macular, and the third complete line (crossing the disc) has its upper half denticulated instead of obtusely angulated; palpi more erect. Expanse of wings 18 millim.

Dharmasala.

The name of the genus was altered by Mr. Moore subsequent to the labelling of his type.

### THALPOCHARES, Led.

#### *Thalpochares argentifrons*. (Plate CXXX. fig. 1.)

Primaries cream-coloured; basal fifth, a dot on costal margin beyond it, a central triangular costal spot, a small subapical costal cuneiform spot, and a narrow, interrupted, irregular outer border blackish; a transverse dash near the external angle and a submarginal stripe whity brown; fringe dark grey, with a pale basal line: secondaries shining grey; fringe paler, with a whitish basal line: vertex of head, palpi, and thorax blackish; face metallic silver; abdomen whitish. Wings below shining whitish: primaries suffused with grey: secondaries with the costal half irrorated with grey; an irregular abbreviated streak from costa to second median branch and an apical dash greyish; fringes grey: primaries with the fringe dark: body below yellowish; anterior legs greyish above. Expanse of wings 22 millim.

Dharmasala; on walls.

Not nearly allied to any known species.

#### *Thalpochares hypenoides*. (Plate CXXX. fig. 2.)

Basal two fifths of primaries pale vinous brown, bordered externally by a dusky zigzag stripe enclosed between two lines, the inner line grey, the outer one black; two black-brown dashes near the base and traces of a slender black line, commencing in a well-defined costal



spot, across the basal fourth; a second ,shaped costal spot commencing the black line of the dusky stripe mentioned above, an almost heart-shaped black-edged brown spot beyond the cell, its apex towards the outer margin, a black subapical longitudinal dash connected by a grey shade with the costa; costal margin beyond the middle dark grey, regularly dotted with white; disc whitish brown, slightly vinous towards costa; external border irregularly greyish; a marginal series of black dots followed by a whitish line at base of fringe: secondaries grey; basi-costal area and a line at base of fringe white: body grey; thorax slightly vinous; collar and tegulæ barred with dark grey. Under surface silvery white, the primaries and costal border of secondaries with faint golden reflections. Expanse of wings 21 millim.

Dharmasala.

**Thalpochares roseana.** (Plate CXXX. fig. 3.)

*Thalpochares roseana*, Moore, *Proc. Zool. Soc.* 1881, p. 370.

Primaries golden olivaceous, a very oblique white belt from base of inner margin to basal third of costa, enclosing a short subbasal dash of the ground-colour; a broad oblique belt beyond the middle, its inner edge straight, its outer edge defined by an unevenly arched blackish line, rose-pink shaded with grey externally and spotted with white on costa; a white stripe partly bounding the oblique belt, a white costal dash immediately beyond it, and a subapical white spot on outer margin; a subquadrate internal patch close to the external angle and a marginal line dusky; fringe with a white basal line: secondaries greyish brown, white at base; fringe paler brown, with white outer edge: head and collar pure white; thorax pearly white; abdomen pale shining brown. Wings below silvery greyish: secondaries almost pure white; fringes of all the wings white: body below pure white; antennæ testaceous. Expanse of wings 11 millim.

Dharmasala.

**ANTHOPHILA, Ochs.**

**Anthophila trilatalis.** (Plate CXXIX. fig. 11.)

*Pyralis* ? *trilatalis*, Walker, *Lep. Het., Suppl.* 4, p. 1237 (1865).

Basal fourth of primaries bright yellow-golden, edged externally by a dark brown dentate-sinuate transverse line; a patch of lilacine grey at base of costa; a broad belt of purplish grey immediately beyond the golden area, bounded again externally by a reversed dentate-sinuate brown-edged golden stripe; costal margin beyond the middle spotted with grey and yellow; remainder of the wing lilacine grey; fringe traversed by a dark stripe: secondaries shining whitish brown; fringe slightly yellowish, traversed by a grey line and tipped with grey: thorax and anal tuft ochreous; abdomen vinous brown. Wings below shining whitish brown; basal area greyish, extreme base slightly reddish: body below vinous

brown; legs whity brown, front legs greyish at the sides, femora greyish above, the tibiæ and tarsi golden cupreous in front; palpi ochraceous; antennæ pale golden. Expanse of wings, ♂ 13 millim., ♀ 15 millim.

Dharmasala.

#### MASALIA, Moore.

##### *Masalia tosta*. (Plate CXXX. fig. 7.)

*Masalia tosta*, Moore, *Proc. Zool. Soc.* 1888, p. 411.

Primaries above pale cupreous brown suffused with pink; costal margin narrowly cream-coloured; a whitish longitudinal streak filling the basal half of the upper radial interspace and tapering backwards almost to the middle of the cell; base of fringe rosy, with a broad subbasal rosy-purplish stripe, tips of fringe silvery white: secondaries sericeous creamy white, the veins and a stripe on the fringe rosy: thorax pale brown; abdomen whitish. Under surface sericeous whitish, the veins and costal borders rosy; a rose-coloured stripe on the fringe, but confined to the apex of the secondaries: body below brownish in front. Expanse of wings 32 millim.

Kúlú.

#### PRADATTA, Moore.

##### *Pradatta bimaculata*. (Plate CXXIX. fig. 12.)

*Pradatta bimaculata*, Moore, *Proc. Zool. Soc.* 1888, p. 411.

Primaries above shining creamy whitish, the median vein and the other veins beyond the cell indicated by pale rose-pink streaks extending into the fringe; a black dot at the end of the cell: secondaries silvery white: head and front of collar sandy brown, remainder of thorax brownish; abdomen white, preanal segment edged with red-brown, anal segment silvery with yellowish central tuft. Under surface silvery white; knees of anterior legs blackish. Expanse of wings 22 millim.

Dharmasala.

##### *Pradatta beatrix*. (Plate CXXX. fig. 6.)

*Pradatta beatrix*, Moore, *Lep. Atkinson*, p. 138 (1882).

Primaries above rose-pink, a longitudinal streak through the cell, a broader diffused streak below the cell, the costal margin and veins creamy whitish: secondaries shining white, the veins and outer border tinted with pink: head and collar rufous brown; tegulæ rosy; remainder of thorax white; abdomen whity brown. Wings below silvery white, veins

brownish; costal borders rose-red, external areas tinted with pink: body below pink; knees of anterior legs blackish; an acute black spine at the extremity of the tibiæ projecting over the tibio-tarsal joint. Expanse of wings 29 millim.

Dharmasala.

The example quoted by Mr. Moore as in Lord Walsingham's collection is labelled as the type: it is one of Mr. Hocking's specimens.

**Pradatta artaxoides.** (Plate CXXX. fig. 8.)

*Pradatta artaxoides*, Moore, *Proc. Zool. Soc.* 1881, p. 365.

Primaries above pale golden stramineous, slightly glossed with pink and with a greyish subhint; secondaries paler, excepting the external border, which is greyer; costal area white; fringes of all the wings pale shining stramineous: head and thorax ochraceous; abdomen pearly whitish. Primaries below shining grey, base of costal margin blackish; remainder of primaries and whole of secondaries pale golden stramineous: body slightly darker, especially in front; femora and tibiæ brownish in front. Expanse of wings 27 millim.

Kúlú.

**Pradatta decorata.** (Plate CXXX. fig. 11.)

*Pradatta decorata*, Moore, *Proc. Zool. Soc.* 1881, p. 365.

Pale shining stramineous: primaries with a streak in the cell; a second streak from base to external angle through the interno-median interspace, an oblique band from apex across the disc to the interno-median streak and the fringe rose-pink: thorax creamy whitish, abdomen slightly greyer, a brown preanal bar. Under surface sericeous creamy whitish: primaries with the rosy markings partly obsolete; fringe at apex of secondaries rosy: pectus silvery white, almost concealed by the creamy-whitish legs. Expanse of wings 19 millim.

Dharmasala.

**CURUBASA, Moore.**

**Curubasa cruentata.** (Plate CXXX. fig. 9.)

*Curubasa cruentata*, Moore, *Proc. Zool. Soc.* 1881, p. 367.

Sericeous cream-colour: primaries with the costal margin and internal border dull pink; fringe with pink outer half; head and collar brownish: primaries below suffused with grey to beyond the middle; costal margin and costal veins tinted with pink; anterior legs slightly tinted with vinous brown. Expanse of wings 25 millim.

Dharmasala.



**HICCODA, Moore.****Hiccoda dosaroides.** (Plate CXXX. fig. 10.)

*Hiccoda dosaroides*, Moore, *Lep. Atkinson*, p. 135 (1882).

Primaries stramineous, crossed in the middle by two or three zigzag testaceous lines; an irregular dentate-sinuate white discal line edged with testaceous; a tapering submarginal testaceous stripe and a marginal series of testaceous spots enclosing black dots; an oblique squamose blackish patch from costa to end of cell, two or three black costal dashes between the latter and the base, and two close together before the middle of the inner margin; a dot at the commencement of the white discal line; two subapical longitudinal dashes and a sprinkling of scales on the fringe black: secondaries grey, with a dark marginal line; fringe pale stramineous, traversed by two grey lines. Under surface paler than above; primaries clouded and secondaries irrorated with grey; tarsi above barred with grey. Expanse of wings 19 millim.

Dharmasala.

**OZARBA, Walk.****Ozarba incondita.** (Plate CXXX. fig. 13.)

Primaries above grey, shot with pink; a dull grey patch at base of costa, followed by an olivaceous patch, below which is a small round spot of the same colour; an irregular pale stripe edged with olivaceous across the basal two fifths, representing the inner border of the central belt, the outer border represented by a similarly-coloured  $\Sigma$ -shaped stripe beyond the middle; outer half of the central belt olivaceous, but interrupted by a blackish and greyish patch at the end of the cell; a small black crescent beyond the latter on the inner edge of the second pale stripe and a well-marked irregular black patch or two longitudinal dashes beyond it; three costal dots beyond the middle and an irregular submarginal line yellowish; a dusky marginal line more or less spotted with black and followed by a yellowish line at base of fringe: secondaries shining grey, changing to brown in certain lights; fringe paler, with yellowish basal line: body grey, the thorax somewhat pearly. Under surface of wings shining grey with brown reflections; fringes with yellowish basal line: primaries with the costa yellowish towards apex; inner margin silvery white: secondaries irrorated with white: body below whitish brown. Expanse of wings 16-20 millim.

Dharmasala; at sugar in July.

Nearly allied to *O. itwarra*, Swinhoe; smaller, more rosy in colouring, with less strongly defined and less irregular central belt on the primaries, with other minor differences of pattern.

**Ozarba venata.** (Plate CXXX. fig. 12.)

Nearest to *O. punctigera*: primaries ash-grey, base of costa spotted with black; the double line representing the inner border of the central belt undulated; the brown and black

ornamentation of the outer half of the central belt nearly as in *O. punctigera*; the outer border of the central belt much more angular and gently sinuated; disc copper-brown varied with lilacine grey, the veins and a submarginal line similar to that in *O. punctigera* white; a marginal series of white-bordered black spots; fringe grey irrorated with brown, with a white basal line and a yellowish subterminal line: secondaries greyish brown, with cupreous reflections. Body and under surface very similar to *O. punctigera*. Expanse of wings 21 millim.

Dharmasala.

*Ozarba venata* is allied to *O. malarba* of Swinhoe, but quite distinct.

## ERIOPIIDÆ.

### CALLOPISTRIA, Hübn.

*Callopietria minuta*. (Plate CXXX. fig. 4.)

Primaries dark sepia-brown, veins whitish; a broad central pale ochreous belt with blackish edges and whitish borders, enclosing a large costal patch of the ground-colour, on which the discoidal spots are represented by two opposed oblique whitish-edged dashes; the central belt is, moreover, gradually contracted from the median vein downwards; two oblique apical dashes, two acute angulated lines the apices of which touch the central belt, a minute sagittate submarginal marking between them (forming part of a slender straight submarginal line), and a line at the base of the fringe whitish: secondaries pale vinous brown; fringe grey, with a whitish line at base: thorax ochraceous; collar black-speckled; abdomen grey. Primaries below shining grey, with cupreous-tinted costal border; a whitish spot at apical third and an angular white submarginal marking; fringe blackish, with white basal line: secondaries sericeous white, the costa, veins, a discocellular spot, and two discal lines brownish: body below pearly. Expanse of wings 18–21 millim.

Dharmasala.

## EURHIPIDÆ.

### PENICILLARIA, Guén.

The species of this genus are all of sombre colours; they all have the basal two thirds or even more of the secondaries pearly white, and the remainder black. Whether they can be eventually kept separate from *Eutelia*, excepting as a colour-group, seems doubtful; it is certain that the greater part of the species hitherto described as belonging to *Penicillaria* must be referred to *Eutelia*; of those named by Guénée *P. jocosatrix* and *P. nugatrix* only can remain in *Penicillaria*.

**Penicillaria maculata.** (Plate CXXX. fig. 5.)

Nearest to *P. jocosatrix*, with a somewhat similarly formed central belt: basal third of primaries with the inner half testaceous and the outer half dark chocolate-brown, bounded by a white line; beyond this is a tapering purplish band from inner margin, bounded externally by an angular diffused testaceous band traversed by two ill-defined blackish lines; the central belt is bronze-brown, shading into purple on the costa and slate-grey towards the inner margin; it encloses the "orbicular" spot, which is purple and almost triangular, and from above which a longitudinal white line runs outwards to the outer edge of the belt; the external portion of the belt is also clouded with black and bounded by two irregular parallel elbowed white lines enclosing a stripe of brown and grey; apical area purplish brown with cupreous reflections, crossed by a slender oblique white line; centre of external area pale olivaceous brown, enclosing a conspicuous semicircular black spot below the elbow of the central belt; inferior half of external area pearl-grey internally, purplish brown externally, divided by a white line; a marginal series of depressed pale-edged dusky lunules; fringe purplish brown: secondaries nearly as in *P. jocosatrix*, but with two conspicuous subanal white dashes. Body and under surface as in *P. jocosatrix*. Expanse of wings 31 millim.

Dharmasala.

## PLUSIIDÆ.

**PLUSIA**, *Ochs.***Plusia hebetata.** (Plate CXXXI. fig. 1.)

Nearly allied to *P. agramma*=*P. inchoata*, but the primaries and thorax of a rosy-purplish colour, the former with paler olivaceous instead of blackish and grey diffused bands, and with the two discal lines sharply defined, the inner one very dark. The under surface of all the wings with a bright golden-cupreous lustre, and with no dusky clouding between the discal lines. Expanse of wings 42 millim.

Kúlú.

Three examples were obtained. A Japanese insect hitherto identified with *P. inchoata* is a large example of this species; but *P. agramma* occurs also in Japan. The almost black discal line across the primaries and the different coloration readily separate the two species.

## GONOPTERIDÆ.

**ANOMIS**, *Hübner.***Anomis figlina.** (Plate CXXXI. fig. 2.)

Primaries dull earthy red, clouded with purplish grey; a blackish oval subbasal patch



below the submedian vein; the inner edge of the central belt indicated by a very oblique undulated blackish line; the outer line slender, black, and dentate-sinuate from costa to second median branch, where it is interrupted and recommences near the origin of the first median branch as a zigzag blackish line; an internally diffused dusky band limiting the external border; discoidal spots large and dusky: secondaries smoky greyish brown: thorax earthy red; abdomen dark smoky grey. Under surface like *A. grandipuncta*, but much darker. Expanse of wings 37 millim.

Dharmasala.

***Anomis cervina*?, var. *instabilis*. (Plate CXXXI. fig. 3.)**

*Briarda cervina*, Walker, *Lep. Het., Suppl.* 5, p. 1968 (1866).

Allied to *A. iconica*: primaries pale shining dun-coloured, sometimes with the costal half to beyond the cell brick-red, the central belt indicated by oblique wavy purplish-grey stripes, two on each side of it; between these there is a conspicuous purplish-grey discocellular crescent; an ill-defined angulated dentate-sinuate grey submarginal line spotted with black; outer margin golden ochreous; fringe rosy, spotted with cinereous: secondaries grey with golden reflections; basi-costal area silvery whitish; fringe pale golden, tipped with white: body greyish olivaceous. Under surface of wings sericeous, pale golden; the primaries with a subcostal streak, and the discocellular spot blackish; discoidal area greyish; external area of all the wings crossed by wavy impressed lines: body below chalky white; legs more or less brown above, the tarsi banded; palpi testaceous. Expanse of wings 27-34 millim.

Dharmasala.

The type of *A. cervina* is larger than the above supposed variety; it is in very bad condition, and the description is incorrect. The insect is decidedly not fawn-coloured, though slightly yellower than *A. instabilis*; it shows but little trace of the undulating lines, but they are five in number (not six); the "very slightly hyaline" character of the secondaries described by Walker is due to the worn state of the specimen; the veins and border are slightly greyer than the remainder of the wing-surface, but are certainly not fawn-coloured: the legs are similar to those of *A. instabilis*, and, lastly, the species does not bear the remotest resemblance to the typical forms of *Briarda*.

The following species, confounded with *A. cervina* by Mr. Hocking, is undoubtedly very distinct, although of the same general tint and found with it "on the plank lining of the verandah roof." Both species seem to have been fairly common.

***Anomis ocellata*. (Plate CXXXI. fig. 4.)**

Nearest to the preceding species. Wings a little paler: primaries with a large shining grey spot at the end of the cell, usually with a black ring round it; costa spotted with grey; a black spot near the base; remainder of the wing irrorated with black scales; fringe of

primaries greyish, tipped with cream-colour, of secondaries cream-coloured, slightly greyer in the central portion. Primaries below grey, with brownish-white costal and external borders and silvery-white internal border; costa irrorated and spotted beyond the middle with dark grey, a similar dark grey discocellular spot: secondaries sordid white, irrorated with grey and black, and with a black spot at the end of the cell: body below as in *A. cervina*. Expanse of wings 31–33 millim.

Dharmasala.

The above description is drawn up from seven examples.

### AMPHIPYRIDÆ.

#### DINUMMA, Walk.\*

*Dinumma* *varians*. (Plate CXXXI. figs. 9, 10.)

Allied to "*Ortheaga*" *combusta* and *Dinumma placens*: primaries varying from dark bronze-brown shot with purple, to flesh-colour shot with rosy lilac; the central belt of about the width and general character of *D. placens*, but with its external prominence at about the middle of the wing instead of towards costa; in dark specimens this belt is scarcely distinguishable excepting with a lens, when its two marginal black lines become clear; the discal lines obsolete as in *D. combusta*, but the submarginal spots as in *D. bipunctata*: thorax varying from pale to very dark brown. In other respects the species corresponds with *D. combusta*. Expanse of wings 20–28 millim.

Dharmasala; taken at sugar.

It is possible that the pale form may be characteristic of the female.

#### ELIOCHROEA, Walk.

*Eliochroea opulenta*. (Plate CXXXI. figs. 5, 6.)

♂ ♀. Nearly allied to *E. pulcherrima* (P. Z. S. 1867, pl. vi.), the wings comparatively broader; the reniform spot always larger, and never so white; the central belt with more decidedly angulated outer edge; a well-defined irregular black-edged macular green submarginal stripe: black external belt of secondaries broader. Expanse of wings 52–56 millim.

*Var.* The basi-internal area, the central belt beyond the reniform spot, and a broad patch forming a continuous belt with the latter to the inner margin pale greenish; orbicular spot white, sharply defined. Expanse of wings 50 millim.

Dharmasala; at sugar in August.

\* *Ortheaga*, Walk., is a synonym of this genus.

*Eliochroea curtipalpis*. (Plate CXXXI. figs. 7, 8.)

♂ ♀. Allied to the preceding species; of the same size and general aspect, but the palpi with short terminal joint, as in *Triphænopsis*: the primaries varying from sepia to clay-brown with black markings; no green markings whatever; the inner line of the central belt ill defined, the outer line well marked and more often than not bounded by a series of pure white lunules; the "reniform" spot quadrate, diffused externally, usually pure white, but sometimes only represented by a few scattered white scales: secondaries differing from those of *E. opulenta* in having a submedian streak of orange as in *Hypocala*. On the under surface the primaries differ in having the base and internal area broadly yellow, and the secondaries in the whitish colour of the apical half of the fringe. Expanse of wings, ♂ 37, ♀ 50 millim.

♀, Dharmsala (two examples only): ♂, N.W. Himalayas.

This species has been confounded with *E. pulcherrima*, a species nearer to *E. opulenta*. It is much nearer to the "*Agrotis? hyblæa*" of Felder.

## HOMOPTERIDÆ.

*Panilla*, Moore.*Panilla apicalis*. (Plate CXXXII. fig. 1.)

Pale reddish testaceous; the wings crossed in the middle by two parallel undulated greyish-brown stripes, followed by a sinuous black line; black marginal dots terminating the veins and connected by a slender undulated marginal black line; a dusky discal band edged internally on the secondaries by a more or less defined zigzag slender black line; discoidal markings crescentic, rufous brown: primaries with black-spotted costal border; a broad sub-basal black-speckled rufous-brown S-shaped marking; a broad blackish and rufous oblique interrupted subapical belt: body varied with rufous brown and speckled with black. Under-side golden stramineous, with the markings less distinct than above; internal borders of wings whitish; anterior legs blackish in front, the tarsi barred with testaceous. Expanse of wings 22 millim.

Dharmsala taken at sugar.

## CATEPHIIDÆ.

*Catephia*, Ochs.*Catephia flavescens*. (Plate CXXXI. fig. 12.)

Primaries above pale testaceous, washed in front with pale green; internal and external



areas burnt-sienna clouded with blackish grey; costa crossed by numerous short black dashes; the double outlines of the central belt ill-defined, excepting where they cross the sienna area, where they are intense velvety black; the inner lines regularly dentate-sinuate, the outer lines falciform and strongly denticulated; the discoidal spots large, greenish, with grey-brown and pearly centres and slender but sharply defined black outlines; a patch at apex, a second at external angle, and several intermediate longitudinal dashes blackish grey varied with intense black and sprinkled with pearly-blue scales: secondaries pale buff, with the outer two fifths (excepting two or three apical spots) dark cupreous brown; fringe with the apical two fifths buff, the remainder black with a yellowish basal line and tipped with white towards anal angle: head and collar testaceous, shaded with sienna, changing in certain lights to rose-pink and barred with blue-black; tegulae burnt-sienna, obliquely banded and bordered with dark brown; thorax and abdomen dark brown, with velvety-black dorsal tufts. Underside of wings whity brown with golden reflections, the costal borders slightly tinted with sienna; three or four subbasal spots and two or three subcostal central spots in all the wings blackish; a broad grey arched discal band, bounded internally by a denticulated blackish line; a very indistinct submarginal series of greyish spots; a marginal series of <-shaped black markings and a series of black spots on the fringe: primaries with a large blackish spot at end of cell: body testaceous, tinted with sienna in front and greyish behind; tarsi banded with blackish. Expanse of wings 39 millim.

Dharmasala; at sugar. Rare.

#### ERYGIA, Guén.\*

*Erygia sigillata*. (Plate CXXXI. fig. 11.)

Nearest to *E. apicalis*; smaller: primaries ash-grey, clouded with greyish olivaceous; a small white spot at base of primaries followed by a whitish cup-shaped spot, the latter limited externally by two ill-defined slightly irregular blackish lines, which form the inner boundary of the central belt; a sprinkling of coarse black scales on the lower half of the central belt, the upper portion enclosing a black-edged dusky orbicular spot and bounded by the outer edge of the so-called "reniform" spot, the interval between these spots being blackish; the "reniform" spot rounded, white, enclosing a grey and black reniform outline; a white costal spot above it; beyond this the costal margin is barred with black; an ill-defined pale sub-apical crescent and three or four longitudinal black dashes in an oblique series; external angle dark grey, bounded in front by a black longitudinal dash; a marginal series of black lunules; fringe dark grey, dotted with whitish behind each marginal lunule: secondaries greyish brown, whitish on costal area; a dusky marginal line; fringe pale at base: body

\* *Calicula* of Walker (Lep. Het. xv. p. 1807) is congeneric with *Erygia*. *E. apicalis*, *Calicula squamiplena*, and *Dianthæcia geometroides* are one species; and *E. usta* is probably only a slight variety of the same.

grey; thorax black-speckled. Under surface pale brown, wings with golden reflections: primaries with greyish discoidal area; a pale crescent at end of cell; costa irrorated with white almost to the middle, and thence alternately black and white to apex; a slender black marginal line; fringe as above: secondaries with whitish abdominal area; a spot at end of cell and a lunulated discal line brown; costal half of wing irrorated with the same colour; a slender blackish marginal line, followed by a whitish line at base of fringe: body below whitish, irrorated with grey; anterior and middle legs with blackish upper surface; tarsi of all the legs above blackish barred with white. Expanse of wings 32 millim.

Dharmasala.

## HYPOCALIDÆ.

### HYPOCALA, Guén.

*Hypocala subsatura*, var. *limbata*. (Plate CXXXI. fig. 13.)

There can be little doubt that this is a variety of *H. subsatura*. The primaries are, however, wholly dissimilar, and, excepting that they are greyer, correspond closely in marking with those of *H. rostrata*: the secondaries and body agree with typical *H. subsatura*. Expanse of wings 43 millim.

Dharmasala. (Three examples.)

It seems highly probable, from a study of the genus, that the species of *Hypocala* are trimorphic, and may be arranged consequently under their varieties thus:—

Primaries uniform:	variegated,	pale bordered.
<i>H. subsatura</i> :	var. <i>aspersa</i> ,	var. <i>limbata</i> .
<i>H. violacea</i> :	var. (unknown),	var. (unknown).
<i>H. deflorata</i> :	var. <i>angulipalpis</i> ,	var. <i>rostrata</i> .
<i>H. guttiventris</i> :	var. <i>lativitta</i> .	

And so on throughout the genus.

## CATOCALIDÆ.

*Catocala inconstans*. (Plate CXXXII. figs. 2, 3.)

Allied to *C. jonasii* and *C. patala*; form and almost the pattern of the former, but in coloration nearer to the latter; from *C. jonasii* it differs in its much darker primaries, which are ash-grey, with the lighter markings whity brown, sometimes edged with white; the lines are black instead of blackish brown; the inner line of the central belt is irregularly and deeply crinkled instead of being slightly trisinate; the outer line is very acutely bidentate

on the radial interspaces, these teeth and also the shorter denticles which follow them being considerably longer than in *C. jonasii*; the line runs inwards and almost divides the belt with a black streak on the submedian vein; the reniform spot is usually better defined, and its outer edge is always dentate-sinuate, whereas in *C. jonasii* it is represented by a slightly curved series of brown spots or dashes; the submarginal line is usually more strongly defined, and much more acutely zigzag; the outer margin is less convex: the secondaries are comparatively wider; the black belt differing in length and form much as that of *C. afghana* does from that of *C. concubia*; the apical spot is of twice the width, and the fringe beyond it is white varied by a series of five brown spots, a sixth broader brown spot terminating the submedian vein. On the under surface there is no decided white apical patch, but the whole external border is whitish ash-coloured; the belt, apical patch, and fringe of secondaries differ as above. *C. patala*, as figured (Reise der Nov., Lep. iv. pl. cxii. fig. 23) has shorter and less acute primaries with very scant markings, the belt of primaries with much more transverse and less irregular inner line; the denticulation of the outer line much less pronounced, and with only one prominent tooth; the angulation on the submedian much less acute, and not terminating in a black dash; the reniform spot quite ordinary in character, and the large spot below it almost pure white: the secondaries with a black abdominal bar joining the central belt. Expanse of wings 74-82 millim.

Dharmasala; at sugar, September and October.

*Catocala distorta*. (Plate CXXXII. fig. 4.)

Nearest to *C. dotata*, but smaller. The primaries paler, browner, and more uniformly coloured; the inner line of the central belt much less defined; the reniform spot pale, represented by a lunate grey outline through which is a buff dash or streak, and followed by a diffused dark grey patch; the outer line of the central belt undulated, but not acutely denticulated as in *C. dotata*; the submarginal denticulated line obsolete, replaced by a dusky diffused streak: the central band of secondaries narrower, slanting inwards instead of outwards, and consequently forming an obtuse instead of an acute angle towards inner margin; the outer border less excavated internally, and therefore wider in the middle, though narrower at anal angle; the apical ochreous spot smaller, duller, and bifid. The under surface paler, with narrower blackish bands; the subbasal band of primaries obsolete. Expanse of wings 50 millim.

Kúlú.

The above description is taken from six examples obtained at Kúlú, compared with nine specimens of *C. dotata* from Dharmasala: the latter vary in one character, and that a remarkable one—the looping of the outer line of the central belt shifts its position from the submedian vein to the first median branch (so as to include the spot below the “reniform” marking), or is duplicated, or disappears altogether. In *C. distorta*, however, the loop is always formed on the first median branch, the spot below the “reniform” marking being consequently invariably absent.



## HYPOPYRIDÆ.

## SPIRAMA, Guén.

*Spirama confusa*. (Plate CXXXII. figs. 6-8.)

♂. Nearest to *S. jinchuena*: a little longer and paler in the wings; the black discal lines of primaries more divergent at the extremities and more regularly curved; the thorax with two distinctly defined pale transverse bands. The under surface slightly more ruddy, with the dark stripes across the wings decidedly straighter, less arched. Expanse of wings 67 millim.

♀. Very like *S. japonica*: larger, comparatively longer and paler, the pale areas less clouded; the central pale band of secondaries wider, almost as wide as the succeeding brown and black band; fringe wider. Under surface much brighter, brick-red; the first line not interrupted by black spots, its lower half bent inwards towards the inner margin; the second line regularly dentate-sinuate throughout, the third line duplicated throughout. Expanse of wings 71 millim.

Dharmasala: taken at sugar.

Females of this species have long stood in the Museum collection without a name; Mr. Hocking regards them as varieties of *S. retorta*, he says:—"They vary greatly, and the species is always abundant. Great numbers were taken, and the conclusion came to was that there was one species which varied." Unfortunately Mr. Hocking only retained one male and two females of *S. retorta*, typical in every respect of that species, and four males and three females of *S. confusa*, so that the supposed variation would appear to be due to the fact that two species, the males of both of which are considerably darker in colouring than their females, were confounded as one. If *S. retorta* and *S. confusa* were to be associated, nearly the whole genus would have to be massed under one name. *S. confusa* should stand next to *S. cohærens* of Burma.

*Spirama rosacea*. (Plate CXXXII. figs. 9, 10.)

♀. Nearest to *S. mollis* of Java: of the same size; it differs in the whole of the wings above being suffused with rose-pink; the three obliquely placed spots in the middle of primaries larger, subconfluent, silver-grey, and not pupillated, the inner arched line across the disk indistinct, and interrupted by the silver-grey spots: on the secondaries the band across basal fourth is barely visible and diffused; the series of dots across the middle is slightly convex instead of prominently concave, and the dots themselves are grey instead of black, the pale band bordering the series of dots externally is better defined and narrower; the abdominal border is clear rosy salmon-coloured: the vertex of the head is tinted with pink. The under surface is decidedly redder, of a fiery orange-red colour, with the two grey discal stripes wider apart. Expanse of wings 74 millim.

Dharmasala.

## EUCLIDIIDÆ.

TRIGONODES, *Guén.**Trigonodes cuneigera.* (Plate CXXXII. fig. 5.)

Primaries above pale sandy brownish; costal border purplish grey; two white-edged cuneiform dark olive-brown patches, one with its point cut off near the base of the inner margin, the other smaller, with its point ending at the apex of the wing: secondaries fuliginous brown: head and collar ferruginous, edged with white; front of thorax and tegulæ blackish; remainder of thorax and whole of abdomen fuliginous brown. Under surface pale sandy brown; primaries with a greyish patch near the middle, and a more elongated paler greyish patch near the outer margin; secondaries with an ill-defined dusky submarginal band. Expanse of wings 40–43 millim.

Kangra; taken, by beating, in July.

EUCLIDIA, *Ochs.**Euclidia captata.* (Plate CXXXIII. fig. 1.)

Primaries above silver-grey; slightly clouded on the disk and external border with brown; an oblique, slender, black line across the basal two sevenths, a second line commencing at the origin of the first median branch, running to inner margin, and then returning across the disk parallel to outer margin to third median branch, whence it bends inwards and continues obliquely to about the outer third of costa; an irregular black central costal patch running to median vein, its outer edge bounded by a white 5-shaped line; beyond the latter, above the commencement of each of the median branches, are three small black spots; an almost triangular subapical costal black spot; a slender black marginal line; fringe brown: secondaries dark bronze-brown, base paler; fringe paler, excepting in the middle, and with a whitish basal line; thorax grey; abdomen whity brown. Wings below pale brown, with cupreous reflections; dusky discocellular spots and discal lines: body whitish. Expanse of wings 30–33 millim.

Kangra.

A nearly allied species occurs at Delagoa Bay.

## THERMESIIDÆ.

## RAPARNA, Moore.

*Raparna undulata*. (Plate CXXXIII. fig. 2.)

♂ ♀. *Raparna undulata*, Moore, *Lep. Atkinson*, p. 178 (1882).

♀. *Asthena querula*, Swinhoe, *Proc. Zool. Soc.* 1885, p. 859, pl. lvi. fig. 16.

Bright Indian-yellow, mottled with ferruginous. Wings with ferruginous (almost copper-red) fringes, and a more or less prominent discal series of spots of the same colour; an almost marginal series of blackish dots; a more or less sinuous, ferruginous-bordered blackish stripe beyond the cell; black discocellular dots: primaries with two more or less defined macular undulated blackish and ferruginous subbasal lines. Primaries below golden testaceous; markings less distinct, broader and greyer than above: secondaries similar, but whitish towards the abdominal margin: body below whitish. Expanse of wings, ♂ 23, ♀ 26 millim.

Dharmasala.

The blackish postmedian band is almost straight on the primaries of the male. Mr. Moore places the genus in the *Thermesiidæ*.

*Raparna usta*. (Plate CXXXIII. fig. 3.)

Allied to *R. fragilis* (" *Aglossa* " *fragilis*) from Natal. Primaries pale sandy buff, faintly mottled with grey; a tapering dull testaceous external border, partly bounded internally by a slightly bisinuated golden-brown stripe, enclosing a submarginal series of spots of the same colour, and bounded externally by a marginal series of semicircular, red-bordered, grey spots; fringe white, mottled with red and with a central grey stripe; basal fourth of costa leaden grey, edged with dark red; remainder of costa cupreous; a zigzag, subbasal series of grey and reddish spots, and a discal bisinuated stripe, terminating in two spots, of the same colours; a minute black dot at the inferior angle of the cell: secondaries pale golden brown, becoming greyish towards outer margin, streaked between the veins and margined with dull red; a marginal series of grey spots; fringe reddish tipped with grey: body flesh-coloured; head, palpi, and collar rosy, barred with dark grey; abdomen slightly yellowish. Under surface for the most part dull rose-red, varied with ochraceous; the wings sericeous, with cupreous reflections; the basi-internal half of primaries grey, the basi-abdominal half of secondaries white; fringes greyish, shining, with a pale marginal line. Expanse of wings 27 millim.

Dharmasala.

*Catada* ? *detersalis* of Walker appears to belong to the same genus. As the latter is an Australian species it was necessary to ask Mr. Meyrick whether he had founded a genus for its reception; it appears that he has not done so, but presumes that it belongs to the *Noctuina*. Walker placed it amongst the true *Deltoids*.

The genus *Aglossa* was formerly used as a temporary asylum for much heterogeneous material.



**DAXATA, Walk.****Daxata glaucescens.** (Plate CXXXIII. fig. 4.)

♂. Primaries above sericeous lilacine grey, traversed by irregular dark brown lines and bands; costal border dark brown, crossed by grey bars to beyond the middle, beyond which it is spotted with transverse white dashes; a subbasal irregular band, a central belt, and a discal band brown, clouded with grey, edged with black-brown; the intervals between these bands traversed by single black-brown lines; reniform spot **B**-shaped on the left wing, partly orange and partly sericeous grey; a black sinuated marginal line: secondaries sericeous smoky brown: body smoky brown; the abdomen greyish at the sides. Under surface smoky greyish brown; wings with cupreous reflections, costal borders densely irrorated with whitish, interrupted by one or two transverse bars of the ground-colour; a slender sinuated black marginal line; costal margin of primaries with four white dots beyond the middle; cell and veins of secondaries irrorated with whitish; fringe greyish, with a darker central stripe and white basal line. Expanse of wings 25 millim.

Dharmasala.

**Daxata lilacina.** (Plate CXXXIII. fig. 5.)

♀. Primaries above sericeous lilac, partly suffused with brown; the basal fourth crossed by three closely approximated, irregular dark brown stripes; reniform spot outlined in dark brown, and followed by two almost parallel irregularly angulated stripes, beyond which is a tapering brown band, dotted on the costa with white, and followed by a series of black lunules, almost parallel to outer margin; a marginal series of conical black spots: secondaries sericeous dark brown, crossed by a slightly darker discal band, and with dusky conical marginal spots: thorax dark brown; abdomen sericeous brown. Underside smoky brown; wings shining, with cupreous reflections; the costa of primaries and whole of secondaries irrorated with darker scales and crossed on the disc by two darker bars; fringe greyish, undulated (so that it appears to be spotted with darker spots), with a slender whitish basal line: body below paler than the wings. Expanse of wings 23 millim.

Dharmasala.

In both of these species the palpi are shorter than in the type of the genus.

**GATHYNIA, Walk.****Gathynia simulans.** (Plate CXXXIII. figs. 6, 7.)

Primaries whitish brown, slightly tinted with pink and irrorated with grey; two greyish patches with blackish edges and cupreous-brown borders representing a central belt (as in *Dirades theclata*); costal margin mottled with blackish; a blackish-edged whitish marginal

line and a small black subapical spot close to outer margin: secondaries rosy greyish, irrorated with blackish, and crossed by a cupreous-brown arched central stripe; a slender blackish marginal line: body pearl-grey; the head and collar smoky grey; thorax slightly rosy. Under surface rosy greyish: the secondaries almost wholly white in the male, irrorated with dark grey, and with a very slender blackish marginal line. Expanse of wings ♂ 23, ♀ 26 millim.

Kangra valley.

"The male folds its wings curiously, flutters like a cripple until approached, then flies a short distance and repeats the performance." The species was confounded with *Dirades theclata*, the male of which it much resembles.

#### ORUDIZA, Walk.

*Orudiza columbaris*. (Plate CXXXIII. fig. 8.)

Sericeous dove-grey; the wings, especially on the basal half, mottled with smoky grey, tending to form transverse lines; fringe ochraceous, spotted with blackish: primaries with a dusky discocellular spot; costal margin with golden reflections: antennæ and anal valves creamy whitish. Wings below less mottled than above; venter whitish. Expanse of wings 26 millim.

Dharmasala.

The irregularity of the outline and the markings on the wings of this species are far less pronounced than in the larger *O. protheclaria*.

#### HYPENIDÆ.

##### RHYNCHINA, Guén.

*Rhynchina plusioides*. (Plate CXXXIII. fig. 9.)

Primaries with the basi-costal half greyish brown, suffused with silver-grey and more or less irrorated with white, its outer edge biangulated and very oblique; crossed at basal third by a single or double, more or less distinct brown  $\Sigma$ -shaped line; discoidal spots ill-defined, outlined in black, or wholly obliterated; remainder of wing dark greyish or reddish-brown; the bases of the second and third median branches and of the lower radial vein snow-white; a double oblique central black line from the inner margin to the cell, and a diffused, more or less pronounced, biangulated, smoky-grey tapering band, enclosing several short black dashes, from the inner margin (beyond the double line) to the apex; a white transverse crescent limiting the band near external angle; a marginal series of depressed

connected-conical brown or black spots, followed by a white stripe at the base of the fringe; remainder of fringe grey, darker at the end of the veins, and traversed by a slender whitish line: secondaries pale sericeous grey, slightly darker at apex; fringe creamy whitish: body grey; palpi brown. Primaries below shining grey, with golden brown reflections; costal margin beyond the middle black, spotted with pure white; fringe more uniformly coloured and more sericeous than above: secondaries sordid whitish or whity brown, irrorated with darker scales, and with a slender black marginal line: body below whitish grey. Expanse of wings 29 millim.

Dharmasala.

A common species, somewhat resembling a *Plusia* or *Plusiodonta*.

*Rhynchina sagittata*. (Plate CXXXIII. figs. 10, 11.)

Primaries reddish to greyish brown, the basal half dotted with black scales; an irregularly sinuated, partly black-edged silver-greyish stripe (obsolete in the male) across the basal third; a short, oblique, ill-defined costal bar united to an indistinct **B**-shaped "reniform" spot, and followed immediately by an unequally angulated, oblique, partly black-edged subsigmoidal central stripe; an acutely denticulated discal stripe near outer margin, and a squamose external border (all these markings are silvery or ash-grey in the female; in the male they are indistinct or wanting); three black subapical sagittate markings, the central one continued in an oblique line to apex; costal margin towards apex blackish with pale spots; fringe nearly as in the preceding species: secondaries pale brownish grey; basi-costal area and fringe sordid white: thorax corresponding in colour with the primaries; abdomen grey. Primaries below sericeous grey; costa irrorated with paler scales: secondaries sordid white, irrorated with greyish-brown scales and with a discocellular lunule of the same colour; a slender blackish marginal line: body below silvery white. Expanse of wings, ♂ 28, ♀ 31 millim.

Dharmasala; taken by beating.

Somewhat allied to *R. plusioides*, and equally abundant; a singular variety occurs in which there is a large basi-internal whitish oblong patch on the primaries.

*Rhynchina cærulescens*. (Plate CXXXIII. fig. 12.)

Primaries pale pearly bluish, irrorated and banded with coffee-brown; two dark grey conical spots dividing the costal border into three nearly equal parts; discoidal spot rounded, outlined in brown, and connected with the inner margin by two oblique coffee-brown lines, the inner one opposite to the inner costal grey spot and connected with it by a pearly-white angular stripe, the outer one followed by a pearly-white stripe enclosing a darker brown line; a diffused brown band tapering from inner margin near external angle to the outer margin just below the apex; three longitudinal costal blackish dashes just before the apex;



an undulated black line followed by a white line along outer margin; inner half of fringe dark brown; outer half testaceous; secondaries brownish grey; fringe testaceous: body and under surface pale greyish brown: the wings below sericeous, with golden reflections. Expanse of wings 29-31 millim.

Dharmasala.

*Rhynchina uniformis*. (Plate CXXXIII. fig. 13.)

Primaries pale golden brown, fringe white; basal half of costal margin narrowly black, apical half white; secondaries darker and greyer than primaries, fringe white; body pale greyish brown, the abdomen rather darker than the thorax, with slender white edges to the segments: primaries below greyish, secondaries whity brown; body below pearly whitish. Expanse of wings 25 millim.

Dharmasala.

*Rhynchina rivuligera*. (Plate CXXXIII. fig. 14.)

Primaries above rose-pink, sparsely irrorated here and there with black scales and traversed by four more or less distinct, very oblique, grey stripes, the fourth of which is parallel to outer margin; a large, cuneiform, golden-cupreous patch, the point of which commences at the base below the cell, and the termination is bounded by the submarginal stripe; a silvery-white stripe, commencing at the base below the cupreous patch, which it bounds as far as the middle of the wing, whence it curves upwards in the male, but turns with a well-defined angle in the female, and terminates at apex; fringe grey, with a very slender basal and a submarginal line white: secondaries sericeous whity brown in the male, greyish in the female, with greyer external area; fringe creamy whitish: body above whitish in the male, greyish in the female. Under surface brassy whitish, the centre of the primaries more or less suffused with grey. Expanse of wings, ♂ 35, ♀ 29 millim.

Dharmasala.

This species seems to be rare, as there is only a single pair in the collection. It appears to be most nearly related to *R. morosa*; but, on the other hand, it is possible that the male of the latter may prove to be totally dissimilar.

*Rhynchina angustata*. (Plate CXXXIII. fig. 15.)

Closely allied to *R. cramboides*: of the same colouring and nearly the same pattern; the primaries are, however, decidedly narrower, the costa comparatively longer, the apex more acute, and the outer margin more oblique and less convex; the pale stripe beyond the middle is straighter, has a slightly wider grey external border, and is followed by only one well-defined (straight instead of undulated) dark grey line; the external area is not greyish as in *R. cramboides*: the secondaries have a less arched outer margin and are much more

sericeous; and the under surface is paler, with more sericeous wings. Expanse of wings 31 millim.

Dharmasala.

\*The straight instead of undulated submarginal stripe on the primaries is probably the most reliable character by which this species may be distinguished from *R. cramboïdes*.

#### HYPENA, Schr.

##### *Hypena crassipalpis*. (Plate CXXXIII. fig. 16.)

Size, outline, and general pattern of *H. rostralis*: primaries pale lilacine greyish irrorated with olive-brown; the broad belt represented by two olive-brown lines similar to those of *H. rostralis*, the outer line slenderly white-edged; no trace of the oblique costal dashes of the European species; "orbicular" spot represented by a small white-edged black spot; "reniform" spot indistinct, 8-shaped; two approximated zigzag olive-brown discal stripes and a more or less diffused, imperfect, submarginal stripe; costa towards apex blackish, spotted with white; a pale-edged, subapical, black spot, an oblique black and grey bidentate patch, forming the upper part of the external border, below apex; a marginal series of white-edged, conical, black dots; fringe whity brown, traversed by two parallel, undulated, dark grey lines: secondaries pale greyish brown, darker towards outer margin; basi-costal area whitish; an interrupted black marginal line; fringe rather paler than in primaries: body lilacine grey, abdomen with white edges to the segments. Primaries pale grey-brown; costal and external borders irrorated with whitish; a short, transverse, bisinuated, brown stripe across the costal border beyond the cell; two short, longitudinal, black, costal dashes before the apex; margin and fringe nearly as above, but the outer undulated line on the fringe blacker; internal border whitish: secondaries whity brown, irrorated with dark brown; a dark brown discocellular spot; an angulated, macular, discal, grey-brown stripe; a diffused external border of the same colour; six conical marginal black spots terminating in two black dashes towards anal angle: body below whity brown, the palpi and front of pectus greyish brown. Expanse of wings 29-33 millim.

Dharmasala.

The palpi of this species are very deep and densely scaled, with erect terminal joint.

##### *Hypena veronica*. (Plate CXXXIII. fig. 17.)

Primaries above bright reddish chocolate, with silvery-blue markings as follows:—an oblique stripe from base of median to basal third of submedian vein; an incurved line starting from beyond the middle of the costal margin, united just above lower radial vein to a nearly straight line which runs obliquely inwards to just beyond the middle of the inner margin; a

sprinkling of scales in two streaks beyond the incurved line above mentioned and above these a large, almost conical, blackish-brown patch, followed immediately by two pale blue spots and an oblique streak of blue scales; the whole external area between the veins irrorated with blue scales which tend to form three series of spots; external border towards apex irregularly blackish; fringe with two blackish central lines: secondaries greyish brown, with bright golden reflections; a marginal line and two lines on the fringe dark grey: thorax rufous brown; abdomen grey, with darker dorsal tufts towards the base. Under surface grey, sprinkled with brown; wings with golden reflections and whitish internal areas; fringes as above; secondaries with a blackish discocellular spot and a faint indication of an arched brownish stripe beyond the cell. Expanse of wings 33 millim.

Dharmasala.

Very close to an unnamed species from Darjiling, but broader in the wings, brighter in colouring, with no oblique streak connecting the elbowed blue line with the apex, but with more continuous series of blue spots on a distinctly wider external area; the form of the palpi also differs considerably. In spite of these differences, to a superficial observer these two species would appear to be identical, and therefore it is necessary to point out the characters which distinguish them.

*Hypena biplagiata.* (Plate CXXXIV. fig. 1.)

Primaries whity brown, slightly tinted with lilac in front; a small black oval spot near base of costal vein; an oblique subquadrate dark brown patch with white margin (its outer edge sinuated) extending from costal margin to submedian vein; a second large triangular patch with a very irregularly-undulated whitish margin extending from the costa beyond the middle to below the second median branch; between these two patches is a chain-like series of small whitish-edged spots, all brown excepting the last, which is black; external area ash-grey, bounded internally by a darker white-bordered stripe; a marginal series of black dots; fringe greyish brown, with a cream-coloured basal line: secondaries pearl-grey, darker along external border; fringe paler than in primaries; head, collar, and prothorax dark brown; remainder of body pale greyish brown. Under surface pale golden brown; primaries suffused with grey, secondaries with white; fringes nearly as above. Expanse of wings 32 millim.

Dharmasala.

*Hypena urticicola.* (Plate CXXXIV. fig. 2.)

Nearly allied to *H. tripunctalis* of Japan. Of the same colours and general pattern; but the lines of the central belt are very indistinct below the cell, the dark costal patch forming the upper half of this belt has a more oblique hinder margin and a more concave anterior margin, the inferior portion being consequently more oblique and the angle much more acute; the outer or bidentate edge of the reniform spot forms a distinct black 3-like line,



which is never the case in *H. tripunctalis*, and the pale apical costal patch is narrower and more elongated; the primaries are comparatively longer with more acute subfalcate apex: on the under surface the grey discal stripe is distinctly angular instead of being simply arched. Expanse of wings 42–47 millim.

Dharmsala; amongst nettles in October and at sugar.

The dark type of this species has been confounded with *H. narratalis*; the latter is, however, uniformly darker, with differently formed and well-defined black lines representing the central belt of primaries.

## HERMINIIDÆ.

### EPIZEUXIS, *Hübner*.

#### *Epizeuxis saccharivora*. (Plate CXXXIV. fig. 7.)

Pale greyish brown; wings with faint lilac reflections; markings blackish, very similar to those of *E. discisigna* and *E. ægrota*, but the third transverse line much less denticulated; secondaries almost as in *E. ægrota*. Expanse of wings 26 millim.

Dharmsala; at sugar in July.

#### *Epizeuxis maculifera*. (Plate CXXXIV. fig. 8.)

Nearly allied to *E. lignea* of Japan; much smaller, paler, whitish and grey: primaries with a cuneiform black spot in the cell between the second and third lines (representing the orbicular spot), reniform spot larger, black, edged with white; postmedian line less denticulated, white-edged; marginal border internally pale-edged: base of secondaries whitish; internal half of the area between the central band and outer border white; otherwise very similar. Expanse of wings 21 millim.

Dharmsala; at sugar in July.

### PSEUDAGLOSSA, *Grote*.

#### *Pseudaglossa fulvipicta*. (Plate CXXXIV. fig. 5.)

Primaries above sericeous lilacine grey, crossed by four nearly equidistant dark brown stripes, the second arched, the others sinuated, the third with pale external edge, the fourth grey-edged, with pure white irroration commencing in two unequal subcostal white spots; discoidal spots bright ochreous, the "reniform" spot **Q**-shaped, enclosing two small black dots; a marginal series of triangular black spots followed by a slender white line at the base

of the fringe: secondaries greyish brown, darker and tinted with lilacine below the subcostal vein; crossed by three blackish stripes, the outermost being darkest, angular, and edged with whitish; marginal spots and fringe as in primaries: body dark purplish brown; abdomen paler. Wings below brown, irrorated with white, stripes wider than above, rufous brown; discoidal spots black: body brown. Expanse of wings 33-35 millim.

Dharmsala; at sugar during the rains.

***Pseudaglossa atrata.*** (Plate CXXXIV. fig. 6.)

Primaries bronze-brown, slightly tinted with lilac; a black subbasal costal dash followed by an irregularly sinuated black line across the basal fourth; a sinuous blackish central band enclosing a yellow-centred black reniform spot; an angular black marking beyond the cell and an irregularly zigzag black submarginal line commencing in a quadrate subapical spot; three yellow costal dots towards apex; a marginal series of black dots: secondaries silvery grey: thorax brown; abdomen grey, with a brown and black dorsal tuft on basal segment. Under surface grey; costal margin of primaries dark, with four pale dots towards apex; fringes with a pale white basal line. Expanse of wings 18 millim.

Dharmsala.

Only two slightly worn examples of this little species were obtained. The genus *Pseudaglossa* seems to be much more nearly allied to *Epizeuxis* than to *Aglossa*.

**HERMINIA, Latr.**

***Herminia palumbina.*** (Plate CXXXIV. fig. 9.)

Near to *H. duplexa* of Moore (Lep. Atk. pl. vi. fig. 18); larger: the primaries slightly yellower in tint; the reniform spot narrower and filled in with black; the black central costal dash longer, more oblique, running parallel to but beyond the reniform spot, forming the commencement of a regularly-arched, denticulated, discal line, whereas that of *H. duplexa* starts independently from costa and is irregular; the submarginal black and white stripe abruptly and widely incised below apex, a diffused blackish shade, tending to unite it to the dentated line, below the incision: secondaries apparently very similar: antennæ less strongly ciliated in the male. Expanse of wings 28 millim.

Dharmsala; at sugar in July.

Four examples were obtained by Mr. Hocking, all of them differing from Mr. Moore's figure of *H. duplexa* in the above characters.

**BLEPTINA, Guén.****Bleptina dubia.** (Plate CXXXIV. fig. 4.)

♀. Brownish grey: primaries darker than the secondaries; a dusky trisinuated line across the basal fourth and an irregularly-undulated central line followed immediately by a pale band from costa to inner margin; a zigzag discal series of white points; a grey apical oblique streak; a marginal series of conical blackish spots followed by a pale line at the base of the fringe: secondaries with similar marginal spots and fringe. Primaries below pale grey; costa darker, with three whitish dots towards apex; marginal spots black: secondaries whitish, especially towards the basi-abdominal area; a discocellular spot and two ill-defined bands across the disc greyish brown; margin and fringe as in primaries. Body greyish white. Expanse of wings 35 millim.

Dharmasala; at sugar in September and October.

Unfortunately there are only four slightly worn female examples of this species in Mr. Hocking's collection.

**EGNASIA, Walk.****Egnasia cinerea.** (Plate CXXXV. fig. 1.)

Closely allied to *E. vaga* (" *Thermesia* " *vaga*) from Silhet, but slightly larger and of a greyish ash-colour, slightly tinted with brown and with white or whitish-edged black markings (*E. vaga*, on the other hand, is lilacine grey varied with ferruginous and ochraceous; the markings less black); in pattern it chiefly differs in having larger and more prominent discoidal spots; the two lines beyond the cell much wider apart in the primaries, but rather closer together in the secondaries; the white submarginal line broadly bordered internally with a diffused black and dark grey shade; and the fringes more distinctly black-spotted. Expanse of wings 40 millim.

Dharmasala.

**EPIPASCHIIDÆ.****BELONEPHOLIS, gen. nov.**

General form of *Cardamyla*: costal vein of primaries running to beyond the middle of costa; subcostal vein five-branched, first branch emitted at about the basal third, running close to the main vein to about the apical third, and thence obliquely upwards to costa, the second starting just beyond the first and running to about the apical fourth, the third and fourth forming a short apical furca and forming a fork with the fifth, which starts about



halfway between the end of the cell and the outer margin ; the upper radial is emitted from the anterior angle of the cell ; the discocellular veinlet is inarched, very delicate, and only partially developed ; the lower radial is emitted from the posterior angle of the cell close to the second and third median branches ; the first median is emitted rather nearer than usual to the second ; submedian vein looped towards the base : secondaries with the costal vein straight, passing so close to the subcostal vein beyond the cell that it almost seems to fork from it : subcostal with two branches which run parallel and close to each other for about one fourth of the distance between the cell and outer margin ; discocellular veinlet unequally angulated ; median branches and radial vein arranged as in the primaries : the wings are coarsely scaled towards the base on the upper surface, and the secondaries are ornamented by about four long, black, needle-like scales emitted above the lower subcostal branch. Body robust ; head large, crested between the antennæ, the male with long recurved plumes, with prominent eyes and thick erect palpi with long needle-like terminal joint ; the abdomen barely exceeds the secondaries in length ; antennæ simple, slender ; legs thick, but tolerably long and with well-developed spurs.

*Belonepholis striata.* (Plate CXXXIV. fig. 3.)

Wings above rose-pink, basal area broadly white brown speckled with black, and followed on the primaries by a black-edged angulated pale band which tapers towards inner margin ; a broad and slightly arched, central, golden-testaceous band ; a slender, arched, discal line followed by a purplish-edged chrome-yellow band ; external border dark glossy red, crossed by black-edged silvery-blue veins ; fringe with a cream-coloured basal line, followed by a glossy red stripe ; the outer half silvery white ; costal border of primaries whitish, speckled with black to beyond the middle : body white brown, speckled with black ; the head, collar, and anal segment reddish. Under surface sericeous, pale golden with pink reflections, the outer borders and a discal line rosy purplish ; inner border of primaries and pectus silvery. Expanse of wings 31 millim.

Dharmasala.

We have a small and imperfect specimen of this species (24 millim. in expanse), obtained in Japan by Mr. George Lewis ; also a second male example in good condition from the same locality.

The above genus is one of the most tedious to describe, the subcostal branches being so much crowded together and the costal border so densely scaled that, even when the wing is denuded, the coarse ribbing of the surface and the character of the veins render examination extremely difficult.

## PYRALIDÆ.

PYRALIS, *Linn.**Pyralis marmorea.* (Plate CXXXIV. fig. 10.)

Allied to *P. farinalis*: primaries with the basal fourth black, with a paler basal spot; outer edge of basal area slightly sinuous, bordered with white, which forms the inner boundary of the central belt, the latter occupying rather more than the central half of the wing, whitish, its outer half irregularly suffused with dull sienna-brown and speckled with black; a more or less pronounced black crescent in the cell; outer border of central belt white, arched and denticulated; costa between the two white borders narrowly black spotted with white; external area blackish internally, whity brown with a submarginal series of blackish spots outwardly; fringe with two smoky-brown stripes: secondaries silvery brownish white, with pale brown lunules towards outer margin and a marginal series of blackish-brown lunules; fringe traversed by a smoky-brown stripe, and with traces of a second stripe towards anal angle: head, collar, and prothorax reddish brown, speckled with purplish black; remainder of body greyish white, the abdomen broadly barred with black and with red-brownish anal segment. Under surface silvery whitish, the markings indistinct, grey discocellular spots; blackish marginal spots: primaries with the basal three fourths of costa black-spotted: body below silvery greyish, the tarsi and the anterior tibiæ above black barred with whitish. Expanse of wings 28 millim.

Dharmasala.

A common species, breeding in skins &c. in the house: it is very distinct from any of the allied forms of the *P. farinalis* group: from *P. elongalis*, Kollar, it differs in the much darker and duller colouring of the upper surface and the whitish under surface of its wings.

*Pyralis fumipennis.* (Plate CXXXIV. fig. 11.)

Coloration of primaries similar to that of *P. farinalis*, but the central belt much less irregular, its outer margin forming a regular arch from costa to below first median branch, below which it is >-shaped: secondaries smoky grey, with markings nearly as in *P. farinalis*: body similar to the lighter examples of *P. farinalis*. Expanse of wings 19 millim.

Dharmasala.

Only one example was in the collection; it is, however, so dissimilar from *P. farinalis* in the pattern of the primaries that it has been necessary to name it.

*Pyralis princeps.* (Plate CXXXIV. fig. 12.)

Primaries with the basal third, internal border, and posterior two thirds of outer border lilac, remainder of ground-colour golden ochraceous, the portion within and immediately

beyond the central belt streaked with blood-red; an oblique metallic silver bar bounding the upper two thirds of the central belt internally and a tapering silver dash from costa bounding the upper third externally; the costal margin between these two silver markings spotted with pale metallic gold; the outer edge of the belt is indicated below the silver dash by a pale sinuous line bordered on both sides with chocolate; fringe lilacine, shading into rosy cupreous and with a dark brown basal stripe: secondaries with the basal third purplish lilac, and bounded externally by a slender sigmoidal silvery-lilac line; central belt cupreous brown, enclosing a small blackish and lilacine ocelloid spot towards costa, and bounded externally by a subangulated undulated black and silvery lilac line followed by a cupreous-brown stripe; external area lilac, glaucous in the centre; a blackish apical submarginal streak and two or three subanal cupreous-brown lunules; fringe much as in primaries: head and collar dull clay-coloured; thorax purple; abdomen greyish brown. Wings below shining silvery, with indications of the colouring and pattern of the upper surface: body below pale golden-brown. Expanse of wings 22 millim.

Dharmasala; at sugar: a rare species.

This is the most beautiful *Pyrallis* hitherto described; we have two examples of it in the Museum from Yezo, and Mr. Hocking obtained four at Dharmasala. It is evidently a local representative of *P. regalis*, but the golden colouring extends over a much greater portion of the primaries.

#### EUCLITA, Hübn.

*Euclita dharmasalæ*. (Plate CXXXIV. fig. 13.)

Allied to *P. platymitris*, of the same colours, but rather smaller; the central belt of primaries one third narrower, its inner edge showing no trace of angulation, its outer edge much more oblique, slightly bisinuate; basal half of secondaries whitish, the central white line more irregular than in *P. platymitris*, undulated. Expanse of wings 20–26 millim.

Dharmasala.

This appears to be a much rarer species than *P. platymitris*.

*Euclita fortis*. (Plate CXXXIV. fig. 14.)

One of the largest species in the genus, with smooth densely-scaled porrected palpi, somewhat as in *E. rubidalis* but more robust and less deflexed. Primaries rosy flesh-coloured, so densely irrorated with dark grey atoms as to appear to be rosy brown; central belt slightly darker than the basal and external areas, occupying about a third of the wing, wider on costal than on inner margin, and with slightly sinuous pale borders, dotted on the costa with whitish; discocellular veinlet blackish; fringe pale buff, tipped and banded with dark grey: secondaries pale sericeous bronze-brown, changing in certain lights to grey; a central abbreviated pale-



edged dusky line from submedian vein; fringe as in primaries: thorax rosy brown, greyish in the centre; head and palpi slightly redder; abdomen bronze-brown. Under surface greyish, with golden-bronze reflections; costal borders slightly rosy; discocellular spots and a discal curved stripe grey; fringes slightly paler than on the upper surface: upper surface of tibiae blackish. Expanse of wings 29 millim.

Kúlú.

This species somewhat reminds one of the Chilian *Blepharocerus rosellus*, Blanch. Mr. Hocking only obtained one example of it.

## HERCYNIDÆ.

### HELIOTHELA, Guén.

*Heliothela pusilla*. (Plate CXXXIV. fig. 15.)

Primaries sericeous, dark cupreous brown, sprinkled in certain lights with shining bluish-plumbaginous scales; the reniform spot of the same colour; the central belt indicated by two irregular black lines partly relieved by pale spots, the costal spot of the second series creamy white: secondaries black-brown, with a large bright ochreous patch extending from the base to beyond the cell, and enclosing a conspicuous subcuneiform black spot; costal area greyish: body black. Primaries below dark sericeous brown, slightly purplish at apex in certain lights; inner border greyish white; base whitish; a small subbasal pale golden tuft; an oblique white band from costa beyond the middle; fringe dark grey, with a pale basal line: secondaries nearly as above, but the basal third of costa ochreous and the remainder of costa black: body below pale bronze-brown. Expanse of wings 11 millim.

Dharmasala; a day-flier.

## ENNYCHIDÆ.

### PORPHYRITIS, Hübn.

*Porphyritis maculata*. (Plate CXXXIV. fig. 16.)

Primaries dark purplish brown; orbicular spot small, ochreous, placed between two very irregular zigzag ochreous bands sprinkled with red scales; the second of these bands is formed by the union of two unequal spots by means of a narrow oblique stripe of the same colour; fringe tipped with silvery white on apical half, and with a continuous black subbasal stripe: secondaries black; a subbasal trifid ochreous patch and an oblique central malleiform ochreous band; a small submarginal ochreous lunule; fringe with the basal half, apex, and a patch in

the centre blackish, remainder pale creamy yellow: body black, with the whole of the divisions outlined in pale yellow; abdomen ochraceous at the sides. Under surface chrome-yellow; costa of primaries black-edged and brown-speckled to beyond the middle; a large purplish-black **Q**-shaped patch at the end of the cell; external border, excepting a spot connected with the ground-colour at external angle, shining dark copper-brown; fringe much more shiny and greyer than above: secondaries with the base yellow, otherwise nearly as above, excepting that the dark portions are browner and shot with fiery cupreous and purple tints: palpi, collar, and under surface of anterior femora and tibiæ white; centre of pectus and of venter brownish. Expanse of wings 14 millim.

Dharmasala; a day-flier.

Allied to *P. formosana*.

## ASOPIIDÆ.

### DANAGA, Moore.

*Danaga picata*. (Plate CXXXIV. fig. 17.)

Wings grey, sprinkled with blackish atoms: primaries crossed before the basal third by a black stripe; a small pure white transverse spot in the cell, followed by a **Q**-shaped blackish marking; a white band broken into two portions and bounded by a white-edged undulated discal black line; base of fringe white spotted with black, outer half black with two white patches: secondaries with a **Q**-shaped marking at end of cell connected by a black line with abdominal margin; a short irregular white band from costa beyond the cell connected by a white line with abdominal margin, and followed by a white-edged undulated black line; fringe white, spotted with black at base; otherwise blackish on apical half, white with an anal blackish spot on anal half: body dark grey: antennæ and proboscis pearly white; head whitish; abdomen with pure white edges to the segments. Wings below nearly as above: body below whitish; legs pearly white. Expanse of wings 17 millim.

Dharmasala.

*Danaga biformis*. (Plate CXXXV. figs. 2, 3.)

♂. Sericeous smoky brown; fringes pale ochreous, with a central dark grey patch, a central series of partly confluent black spots, apex of primaries dark grey; costa of primaries pale ochreous, crossed by seven black spots, the fifth and sixth annular; lines of central belt very irregular, blackish, the centre of the belt occupied by a transverse ochreous band interrupted in front by the discoidal spots, which are black and annular; inner line of the central belt bordered with ochreous; a marginal ochreous spot near external angle: secondaries black at base, followed by a broad, very irregular, externally blackish-edged belt enclosing a

black discocellular spot; towards the abdominal margin the yellow extends slightly beyond the blackish edging; a yellow spot below the middle of outer margin: antennæ whitish; thorax spotted with creamy whitish; abdomen with a pale yellow basal band, anal segment orange with a central silver-grey spot. Wings below cream-coloured to about the middle, with the markings blackish, remainder of wings greyish bronze with a cream-coloured marginal spot; costa of primaries cream-coloured with black markings; fringes as above: body below creamy white. Expanse of wings 21 millim.

♀. The primaries partly suffused with pale ochreous to the outer edge of the central belt; the black lines limiting the belt are consequently much more prominent: body suffused with yellow throughout; otherwise very similar to the male. Expanse of wings 20 millim.

Dharmasala; taken at sugar.

Evidently a common species. The dissimilarity of the sexes is unusual in this genus.

#### CINDAPHIA, *Led.*

*Cindaphia tricolor.* (Plate CXXXIV. fig. 18.)

Purplish brown: primaries with a small triangular spot near the middle of the cell and a large oval spot across the end of the cell hyaline white; two yellowish costal spots on the outer half of the wing, and a large diffused ochreous spot below them and just beyond the oval hyaline spot; fringe blackish with two pale lines, the outer half alternately blackish and white: secondaries with silvery basi-costal area; a large hyaline white oval spot in the cell, connected with the abdominal margin by an irregularly-denticulated narrow pale yellow line; an irregularly arched discal series of dots and a submarginal spot of the same colour; fringe similar to that of the primaries: body blackish, head and collar sprinkled with yellowish scales; abdomen with white edges to the segments. Primaries below with the basal two thirds ochreous; markings as above: secondaries with the base and a lunate patch on costal half beyond the middle pale yellow; otherwise as above: pectus and legs whitish brown; venter silvery white. Expanse of wings 18 millim.

Dharmasala.

Although four or five distinct tints occur in the colouring of this insect, they all resolve themselves into shades of dark brown, ochreous, and white.

#### DIPLOTYLA, *Meyr.*

*Diplotyla longipalpis.* (Plate CXXXV. fig. 4.)

Primaries smoky greyish brown, suffused over basal two thirds with reddish; a pale spot in the cell; inner stripe of central belt slightly oblique, sinuated in the middle, ill-defined; outer line somewhat as in *D. ochrosema*, but less irregular though more minutely denticulated;



fringes of all the wings pale buff, traversed by a series of black dashes on basal half, otherwise smoky grey with silvery tips : secondaries fuliginous brown, with whitish costa : body bronze-brown \*. Wings below pale bronze-brown, with white-edged grey discocellular spots and irregular discal stripe ; fringes as above : pectus and legs bone-whitish ; the femora with a brownish central spot on their inner sides. Expanse of wings 24 millim.

Dharmasala.

The palpi of this species are unusually long for the genus.

#### THYSANODESMA, gen. nov.

Allied to *Nacoleia*, but the antennæ of the male moniliform, tapering, with fine ciliations, each joint being terminated by two fine hairs, one from each anterior angle. Type *T. præteritalis* (*Asopia*? *præteritalis*, Walk.).

In his 'Lepidoptera of Ceylon' Mr. Moore correctly characterizes the genus *Nacoleia* ; but, in all probability, his descriptions of the species were drawn up from female examples, and consequently will have to be transferred to the present genus. The males seem to be rare, as both of the specimens collected by Mr. Hocking, viz. "*Nacoleia costisignalis*" and the following new species, are females.

#### *Thysanodesma major*. (Plate CXXXV. fig. 5.)

Nearly allied to *T. præteritalis*, but much larger, less brown in colouring ; markings much blacker ; the primaries with the costal margin only black-spotted between the two black lines representing the central belt. Expanse of wings 19 millim.

Dharmasala.

#### GADESSA, Moore.

#### *Gadessa*? *ossea*. (Plate CXXXV. fig. 6.)

Bone-whitish, clouded with patches of grey scales ; pattern very similar to *Hedylepta vulgalis*, but the reniform spot of primaries broad ; the orbicular spot nearer to the inner stripe of the central belt, and the outer stripe of the secondaries more irregular and divided in the middle. Expanse of wings 22 millim.

Dharmasala.

This species bears considerable resemblance to some of the American forms placed by Lederer in his genus *Blepharomastix* ; but the structure of the palpi is entirely dissimilar.

\* The abdomen has been stuck on and may not belong to the specimen ; it is pearl-grey, white below.

## HYDROCAMPIDÆ.

OLIGOSTIGMA, *Guén.**Oligostigma locuples.* (Plate CXXXV. fig. 7.)

Nearly allied to *O. iambealis*; the wings shorter, bright silver with golden-ochreous bands, for the most part narrowly edged with blackish: primaries with the pattern of *O. iambealis*: secondaries with four ochreous bands, the first subbasal, abbreviated, the second angulated, before the middle, the third discal, tapering at anal angle, united at both extremities to the fourth, which is marginal and unequally trisinuated; a marginal blackish edging to all these bands excepting the short subbasal one: body silvery white, with an ochraceous band across the back of the tegulæ and thorax. Expanse of wings 14 millim.

Dharmasala.

Evidently rare, as Mr. Hocking only obtained one example.

*Oligostigma dives.* (Plate CXXXV. fig. 8.)

Smaller than the preceding species; black-edged discocellular spots on all the wings; the second band of secondaries quite different, in form **P**-shaped, enclosing the discocellular spot; otherwise almost exactly the same in pattern. Expanse of wings 12 millim.

Dharmasala.

Five specimens of this little species were obtained.

HARITALA, *Moore.**Haritala definita.* (Plate CXXXV. fig. 9.)

Most like *H. trigalis*; pale stramineous. Wings with a continuous band across the basal sixth and a submarginal band pale greyish brown: primaries with three black stripes, the first subbasal, the second crossing the middle of the cell, the third commencing at about the apical fourth of costa, running in a slightly oblique sinuous line to first median branch, where it bends abruptly inwards and disappears, recommencing near the base of the same nervule and running obliquely inwards to inner margin; a black discocellular lunule; fringe traversed by a black line and tipped with white and black: secondaries with an oblique black stripe across basal third united to a slender black abdominal line, and an abbreviated black stripe from costa to first median branch across external third; a diffused brownish patch between these stripes; fringe as in primaries: body pale golden stramineous varied with silvery white; collar and tegulæ spotted with black. Under surface creamy white; markings much less distinct than above; costal border of primaries golden stramineous. Expanse of wings 33 millim.

Dharmasala.

## MARGARODIDÆ.

HETEROCNEPHES, *Led.**Heterocnephes venosa.* (Plate CXXXV. fig. 10.)

Bronze-brown: wings shining; fringes silvery, with a slender central greyish line; outer margin black: primaries with a large cuneiform costal patch beyond the middle, the front of this patch is golden ochreous and the back part white; external area greyish white, crossed by black veins and internervular streaks: secondaries with the costa and apical border whitish: head above with a semicircular patch in front and the margins pearly white; edges of abdominal segments and anus with golden reflections. Wings below paler than above, the bases and internal areas greyish white: body below pearly white. Expanse of wings 28 millim.

Dharmasala.

## BOTIDIDÆ.

SCOPULA, *Schr.**Scopula bisignata.* (Plate CXXXV. fig. 11.)

Primaries sericeous, pale golden or cupreous, with black discocellular spots; the dentate-sinuate discal line almost or altogether obliterated; fringe slightly paler than the rest of the wing: secondaries sericeous, greyish with golden reflections, darkest at apical border; fringe pale golden; costa white: body pale golden, the thorax slightly brownish. Wings below pale shining bronzy grey, fringes paler: body below creamy whitish, palpi ochraceous; antennæ pale golden. Expanse of wings 24 millim.

Dharmasala.

A common species.

## ÆGERIIDÆ.

MELITTIA, *Hübner*.*Melittia kulluana.* (Plate CXXXV. fig. 12.)*Melittia kulluana*, *Moore, Proc. Zool. Soc.* 1888, p. 392.

Near to *M. chalciformis* from Moulmein and Java; it chiefly differs in the much narrower dark external border of primaries, and consequently in the much greater width of the hyaline area preceding it. Expanse of wings 30 millim.

Kúlú.

Mr. Moore compares this with *M. nepcha* and *M. indica*; the former is not in the Museum collection, the latter is less closely allied to it than *M. chalciformis*.



## URAPTERYGIDÆ.

URAPTERYX, *Leach*.*Urapteryx excellens*. (Plate CXXXV. fig. 13.)

Creamy white: primaries slightly tinted with sulphur-yellow; costal margin narrowly black; an oblique dark grey band, commencing just beyond the basal fourth of costa, and running to about the external fourth of inner margin, continued as a slender blackish line almost to external angle, where it unites with a second similar band from third fifth of costa; between these two bands is a dark grey discocellular stripe; a longitudinal dark grey stripe along the submedian vein from the base to the first oblique band; fringe of inner margin grey, tipped with white; costal area towards the base crossed by short dark grey lines, two of which are also present between the two grey bands; disc transversely striated with blackish lines; outer margin, excepting at external angle, black, with dark grey fringe: secondaries with a bright yellow band near outer margin from first subcostal to first median branch, bounded internally by an oblique blackish streak and a series of groups of black scales; first median branch mottled with black; submedian vein black; five black marginal spots; fringe dark grey, excepting at anal angle; an apparently grey arched central band produced by the transparency of the wing, which renders the markings of the under surface visible above: face spotted with brown in each corner. Under surface of wings pale stramineous, shading into ochraceous; grey and blackish markings as above, but better defined, costal borders blotched with blackish: secondaries with a small black spot at the end of the cell followed by an arched black band from third fifth of costa to extremity of interno-median fold: body below white; legs mottled with black. Expanse of wings 52 millim.

Cashmere.

In form this species comes nearest to *U. maculicaudaria*; but in colouring it is unlike any other described *Urapteryx*; it somewhat reminds one of *Tristrophis veneris*, but the neuration is that of the typical genus.

## ENNOMIDÆ.

TETRACIS, *Guén.\***Tetracis indica*. (Plate CXXXV. fig. 16.)

Pale brown, the primaries and abdominal half of secondaries slightly suffused with pink; a slightly darker central band with dentate-sinuate greyish edges, the denticles indicated here

\* Represented by a female example only, the palpi of which are injured; it is therefore possible that it may represent the type of an allied new genus.

and there by blackish points on the nervures; a sinuous discal line, conspicuously spotted with black on the primaries, excepting between the median branches; a submarginal series of minute black dots; fringe with a pale basal line, central and terminal grey lines: primaries with an oblique line, spotted with black on the veins, across the basal fourth; this and the two lines of the central band commencing in oblique blackish costal dashes; external area slightly darker than the prevailing ground-colour and irrorated with blackish atoms: secondaries with pale costal area; the whole surface irrorated sparsely with blackish and grey atoms: head and antennæ pale buff, palpi black; thorax tinted with ash-grey. Under surface sericeous straw-yellow; the lines of the upper surface represented by series of blackish spots, excepting the inner line of the central band, which is obsolete on the primaries, but represented by a mottled grey stripe on the secondaries; the irroration of the wings more prominent than above: pectus speckled with black; abdomen with a lateral series of black spots. Expanse of wings 54 millim.

♀, Dharmasala.

The form of the wings in this species is identical with that of *Tetracis*, but the colouring of the wings much more nearly resembles *Zethenia*; from what remains of the palpi the species would seem not to be a typical *Tetracis*, but until more examples are obtained it would be premature to separate it generically.

*Psyra debilis* of Warren must be placed next to *T. indica*, from which it principally differs in its straw-coloured wings and inferior size; neither of them correspond strictly with *Psyra* in the angulation of their wings.

#### PSEUDOMIZA, gen. nov.

Form of wings as in *Cimicodes* (*C. torquataria*); antennæ of the male varying from the ciliated to the pectinated type, as in that genus; but the palpi angulated, with naked terminal joint: the primaries with the second and third median branches much wider apart at their origins.

Nearly allied to *Omiza*: the antennæ less strongly pectinated: the primaries much more acute, the costa less convex or even sinuous, the furca of the subcostal vein much shorter; the outer margin more convex: the secondaries wider, with the second and third median branches nearer together at their origins. Type *P. castanearia*.

This genus will contain *Ellopi formosa* and *E. pulchra*, *Cimicodes sanguiflua*, *C. flava*, *C. cruentaria*, *C. castanearia*, and perhaps *Ennomos spilotelaria*.

#### *Pseudomiza argillacea*. (Plate CXXXV. fig. 15.)

Clear ochraceous clay-coloured irrorated with black atoms; a straight oblique ferruginous line, bordered internally by a pale pink sericeous stripe, from apex of primaries to just beyond the middle of the abdominal margin of secondaries; outer border rosy lilacine; fringes ferruginous, edged with ochreous in the primaries; costal border of primaries deep dull orange, the

margin ochreous flecked with black; a barely perceptible trisinuated reddish line across the basal fourth; a black spot at the end of the cell: head and collar dark red-brown; antennæ and abdomen much paler, the former rosy. Under surface pale rufous brownish, sericeous: the wings mottled with black; a black spot at the end of each discoidal cell; the oblique stripe darker than above, bordered internally with ochreous and pink; outer margins lilacine pink; fringes darker than above; costa of primaries paler than above: legs slightly black-speckled. Expanse of wings 37–40 millim.

Dharmasala; at sugar in September.

#### CORYMICA, *Walk.*

##### *Corymica vitrigeria.* (Plate CXXXV. fig. 14.)

Nearly allied to *C. pryeri* of Japan: of the same colours and general pattern; it, however, differs constantly in the fact that the dark spots on the inner margin are united at their inner extremities by a longitudinal brown bar, the two inner ones invariably, but all three usually; the spot, below these markings, on the costa of secondaries is also widened upon the margin, so that it is funnel-shaped instead of forming a short transverse band, and the spot on the abdominal margin is decidedly larger. Expanse of wings 35–40 millim.

Dharmasala; obtained by beating.

All the species of *Corymica* are very closely allied; but if Mr. Hocking had not retained eight examples of this species, it would have been impossible to be sure of the constancy of the slight characters which distinguish it from the Japanese form.

#### HYPEPHYRA, gen. nov.

Nearest to the New-World genus *Acrosemia*, of the same form and with very similar neurulation, palpi, and antennæ; the body is, however, altogether weaker and much shorter; the tegulæ smaller and without the long fringes of *Acrosemia*, and the anal tuft is less developed; the coloration is intermediate between *Hyperythra* and *Ephyra* or *Anisodes*, from all of which genera the short and delicate ciliation of the antennæ at once distinguishes it.

##### *Hypephyra terrosa.* (Plate CXXXV. fig. 17.)

Whity brown suffused with pink, irrorated with darker brown; external third of wings darker than the rest of the upper surface, bounded internally by an indistinct brownish-edged slightly irregular transverse paler line: primaries with the costa pale, flecked with blackish: secondaries with a grey discocellular spot. Under surface pale creamy stramineous, sparsely irrorated with grey; external area of primaries deeper yellow, with a greyish patch towards inner margin; fringes grey, with bronze reflections. Expanse of wings 40 millim.

Dharmasala.



**ABACISCUS**, gen. nov.

Aspect of *Hypochroma*; of similar form and markings; but structurally nearest to *Angerona*, there being no radial to the secondaries; the antennæ finely ciliated, not pectinated as in *Angerona*; the palpi broader; the tibiæ of the posterior legs almost twice the length of those of *Angerona*, more uniformly thickened and flattened; the tarsi shorter: venuration of primaries very similar, but the costal and subcostal veins of secondaries are distorted so that they are contiguous for about a quarter of their length from the base.

**Abaciscus tristis.** (Plate CXXXV. fig. 18.)

Primaries smoky blackish, crossed at basal fourth by a zigzag black line and at centre of disc by a subangulated dentate-sinuate black line edged externally with white crescents and dots, and terminating on inner margin in a mottled patch of white; a transverse black discocellular litura; a submarginal series of white spots; a patch of white scales, bounded internally by a white crescent, on the outer border within the second median interspace; fringe spotted with white: secondaries white mottled with blackish, apical border blackish, traversed by three white crescents; anal border less distinctly blackish, also enclosing three white crescents; central belt represented by two dentate-sinuate black lines, the inner one oblique and slightly arched; the outer one strongly arched; an oblique black discocellular dash between the two lines; fringe spotted with black: thorax dark smoky grey, with whitish bands across the end of the tegulæ; abdomen brownish, with two dorsal series of black spots and more or less prominent transverse whitish bands. Under surface chalky white, irrorated with dark grey; other markings nearly as above, but almost wholly silver-grey instead of blackish: antennæ below orange. Expanse of wings 40 millim.

Dharmasala.

**AMPHIDASYIDÆ.****AMPHIDASYS**, *Treit.***Amphidasys porphyria.** (Plate CXXXVI. fig. 1.)

♂. Allied to *A. robusta* of Japan; a little smaller, with narrower wings; the outer borders paler, with irregularly dentated internal white edges; the central belt much wider on the primaries, and bordered by considerably thicker and blacker lines: the outer line of the secondaries also thicker, blacker, less angulated, and nearer to outer margin: the thorax decidedly blacker; the antennæ shorter and much less red in colouring. Expanse of wings 70 millim.

Kangra district; reared from pupa.

## BOARMIIDÆ.

ALCIS, *Hübner*.*Alcis sublimis*. (Plate CXXXV. fig. 19.)

Primaries above with the basal third granite-grey, mottled with whitish and traversed externally by two sinuous black stripes; central third white, striated with grey, and in the male suffused with pale buff; an imperfect series of black or blackish spots on the veins near the outer edge of this whitish belt; a grey and blackish blotch at the end of the cell; external third granite-grey varied with blackish or black; an interrupted zigzag whitish or white stripe across the middle of this area, and a pale buff or whitish diffused spot near outer margin on second median interspace; fringe whitish, spotted with smoky grey; secondaries pale granite-grey, fading into white towards costa; two divergent widely separated darker grey streaks and a spot at the end of the cell, all obsolete in the male, but fairly well-defined in the female; a zigzag submarginal white stripe, bordered internally with dark grey or black towards the abdominal margin: thorax granite-grey; shank of antennæ dotted with white; abdomen more or less grey, with white hind margins to the segments, anal tuft pale buff. Under surface sericeous white; a broad grey border spotted with white as in the allied species; fringes as above; slight grey traces of the upper surface markings visible through the wings; costa of primaries mottled with black; anterior tibiæ and tarsi black, barred with cream-colour above. Expanse of wings 40–48 millim.

Dharmasala, and at Trioon above Dharmasala, 9000 feet elevation, where it flew out of the grass.

The pattern of this species somewhat resembles that of *A. trikotaria*; it is nevertheless much more nearly allied to *A. noctivolans* of Japan; it appears to be a common species, as Mr. Hocking retained nine examples.

CHOGADA, *Moore*.*Chogada latipennis*. (Plate CXXXVI. fig. 2.)

♂. Whitish brown, irrorated with smoky brown; external area slightly browner, bounded internally by a dark brown dentate-sinuate band enclosing a pale stripe; a second somewhat similar band, bounded internally by a black line, beyond the middle; this line on the primaries is elbowed and strongly denticulated from the costa to the angle; a more regular dentate-sinuate dark brown central line; a very irregularly angulate black line across the basal third; "reniform" spot blackish-bordered, elongate-pyriform: secondaries with an elbowed line across basal fourth; the discocellular spot cuneiform: abdomen crossed by abbreviate white-edged black transverse bars. Underside pale sericeous brown; blackish discocellular dashes;

an arched postmedian series of blackish dots on the veins, and a diffused greyish submarginal band ; costa of primaries ochraceous. Expanse of wings 47 millim.

Dharmsala.

## GEOMETRIDÆ.

### LOXOCHILA, *Butl.*

*Loxochila variegata.* (Plate CXXXVI. fig. 3.)

Emerald-green, streaked and banded with pale pinky brown with whitish edges : the primaries with two bands diverging on the costa : the secondaries with a broad belt occupying the greater part of the outer half of the wing ; fringes alternately brownish and silvery white ; costa and apex of primaries clear golden yellow varied with purplish brown ; costa of secondaries silvery white ; palpi rufous brown ; vertex of head whitish ; antennæ yellow ; abdomen with white edges to the segments. Under surface of wings with the markings of the upper surface white, partly lost in the white colouring of the basal area ; external areas pea-green ; a brown-dotted dusky denticulated discal line across the wings ; costa and apex of primaries nearly as above ; basal area of wings opaline : body pearl-white. Expanse of wings, ♂ 40 millim., ♀ 51 millim.

Dharmsala.

### NEMORIA, *Hübner*.\*

*Nemoria gracilis.* (Plate CXXXVI. fig. 4.)

Pale emerald-green ; an indistinct sinuous narrow silvery-white line across the disc of the wings almost as in *N. viridata* ; a second less distinct line just before the middle : costa of primaries and basal half of fringe on all the wings pale creamy yellow ; outer half of fringe silvery white : vertex of head white, the antennæ slightly yellowish ; face, anterior coxæ, and inner side of anterior tibiæ and tarsi reddish testaceous ; inner side of other tarsi shining ochreous. Wings with a slender golden-ochreous marginal line. Expanse of wings 22-24 millim.

Dharmsala.

The lines across the upper surface of the wings in this species are so indistinct, but more especially the inner line, that they might easily be overlooked in worn or faded specimens.

*Nemoria gelida.* (Plate CXXXVI. fig. 5.)

Silvery whitish, densely irrorated with emerald-green ; fringes tipped with white : primaries with the base of the costa and two stripes, dividing the wing into three equal parts,

\* This genus is said to have pectinated or ciliated antennæ in the male ; in *N. viridata* and allies the antennæ are simple.



silvery white : secondaries crossed just beyond the middle by a single white stripe : vertex of head, palpi, upper surface of antennæ and abdomen, excepting at the base, white ; face brownish testaceous. Wings below greenish white : body white, legs creamy white. Expanse of wings 27 millim.

Dharmasala ; in June.

Three examples only were obtained.

THALASSODES, *Guén.*

*Thalassodes unduligera.* (Plate CXXXVI. fig. 6.)

Pale sea-green ; the angulation of the secondaries very slightly defined, so that the form of the wings closely resembles that of *Nemoria* : primaries with the costa narrowly pure white ; two undulated indistinct slender white lines similar to those of *T. ambigua* of Japan ; fringe of outer margin white : secondaries with a single line as in *T. ambigua* and white fringe ; face chestnut-red, pale in front ; vertex of head and shaft of antennæ white ; pectinations of antennæ pale brownish testaceous. Wings below greenish white, sericeous, without markings, fringes white ; costal margin of primaries pale yellow : body below pearly white. Expanse of wings 27–32 millim.

Kúlú.

COMIBÆNA, *Hübner.*

*Comibæna quadrinotata.* (Plate CXXXVI. fig. 7.)

Pale pea-green ; costal margins of wings silvery white ; a black spot at the end of each cell ; a few blackish marginal points ; a large purplish-grey spot at external angle of primaries and another at apex of secondaries ; fringes greyish white, flecked with purplish grey opposite to the spots of that colour, and with a pure white basal line : primaries crossed by two widely separated extremely indistinct irregular whitish lines : body white, the antennæ with greyish pectinations, the thorax and base of abdomen suffused with green. Under surface of wings opaline greenish white, fringes as above ; black discocellular spots as above : secondaries with a narrow brown apical streak : body pure white. Expanse of wings 28 millim.

Dharmasala.

RACHEOSPILA, *Guén.*

*Racheospila strix.* (Plate CXXXVI. fig. 8.)

Allied to *R. albociliaria* of the New World : pea-green, the wings crossed by a strongly denticulated pale red-brown discal line, the denticles of which are tipped with dark brown ; fringes pale yellow, spotted with dull rose-reddish and tipped with pink : primaries with silvery-white costa ; a trisinuated arched pale red-brown line across the basal fourth ; two brown

dots, the lower one with blackish centre at end of cell: secondaries with a conspicuous subquadrate dark purplish slate-coloured patch on the abdominal margin just above the middle: vertex of head, shank of antennæ, and probably the abdomen white. Under surface pearly white, without markings. Expanse of wings 31 millim.

Dharmasala.

The body of this species has already partly faded to the usual uniform buff tint.

#### CHLORORITHRA, gen. nov.

Nearest to *Thalassodes*: of the same form and with similar antennæ; the palpi, however, are broadly fringed and the terminal joint is shorter; the hind legs are slightly longer: in the primaries the upper radial does not form a branch of the subcostal vein, but is emitted from the anterior angle of the cell, and the second and third median branches are emitted together from the posterior angle of the cell, instead of from a footstalk: in the secondaries the discoidal cell is lengthened and prolonged in front, emitting the subcostal branches and radial vein separately, and the second and third median branches from one point at its posterior angle; the discocellular veinlet consequently is strongly inangulated.

The only figured species of Guenée's genus (and therefore the type) is *T. pilaria* of Tahiti, specimens of which were acquired in a collection purchased from Mr. Gervase Mathew. *T. pilaria*, which is very imperfectly figured by M. Guenée, turns out to be identical with *T. opalina* of Darjiling.

#### *Chlororithra fea*. (Plate CXXXVI. fig. 9.)

Somewhat similar to *Asthena ordinata* in coloration, very pale olive-green with white-bordered testaceous markings; the wings crossed by four white stripes forming two chain-like bands; the two central stripes bounding the lines of the central belt which have the irregular character of those in *Tanaorhinus dimissus*; these lines commencing in the primaries in quadrate spots on the costa; a third similar spot between them; a triangular spot in the posterior angle of the cell, and three white spots also within the central belt; costa white, crossed near the base by four little greenish striæ; the outermost stripe on all the wings bounded here and there on both sides by brownish-testaceous spots; fringes white: antennæ with grey pectinations. Under surface white: primaries with greyish indications of the markings of the upper surface: secondaries with a blackish subapical spot. Expanse of wings 36 millim.

Dharmasala.

Mr. Hocking reared *C. fea* from larvæ found on oak (*Quercus alba*); he says that it is so much like the flower of this tree as to be with difficulty distinguished from it.

The neuration of *Chlororithra* is very similar to that of *Pseudoterpna*; but the antennæ and palpi are quite dissimilar.

CYCLOPHORIDÆ. *Moore.*ANISODES, *Guén.**Anisodes annulifera.* (Plate CXXXVI. fig. 10.)

Closely resembling *A. metaspilata* of Venezuela, but with much shorter palpi; much less red, of a dull rosy clay-colour; the front of thorax and costa of primaries lilacine; edge of costa golden orange; discocellular spot larger; the discal greyish transverse streak replaced by an irregular zigzag grey line, the spots beyond it larger and less black; marginal spots larger: secondaries with the discocellular spot smaller; otherwise differing as in the primaries. Under surface of both species almost identical. Expanse of wings 37 millim.

Dharmasala; at sugar in October.

This species should stand between *A. metaspilata* and *A. carnearia* of Ceylon.

## IDÆIDÆ.

EOIS, *Hübner.**Eois lacteipennis.* (Plate CXXXVI. fig. 11.)

Primaries sericeous cream-whitish, faintly irrorated with rose-colour; a rosy or lilac band, bounded internally by a carmine or purple-edged, irregularly sigmoidal, whitish stripe, from external angle to lower radial vein: secondaries cream-whitish, densely irrorated, excepting on outer margin and fringe, with blood-red, shading into lilac towards outer margin; a macular bisinuated central crimson-bordered whitish band: body and under surface cream-whitish; wings with an internally sinuated lilacine-grey submarginal band. Expanse of wings 16 millim.

Dharmasala; at sugar in July.

Allied to *E. ostrina* of Europe.

*Eois protensa.* (Plate CXXXVI. fig. 12.)

♂. Intermediate between *E. ostrina* of Europe and *E. jakima* of Japan; but smaller than either; it differs from *E. jakima* in its more produced primaries, paler colouring, narrower costal border to the primaries, in the middle line of these wings being more central, passing through the discocellular litura, which is much more strongly marked, the submarginal line inangled towards the costa, less irregular in other respects, much darker; the



marginal line continuous and purplish black and the external area not rosy but crossed by dark veins and enclosing two marginal brown spots, one central, the other at external angle : in the secondaries the lines are formed as in *E. ostrina*, but the external area is not rosy, and the marginal line is purplish black. Expanse of wings 19 millim.

Dharmasala.

There is a small faded female, with greyish external area to the primaries, which may be referable to this species.

#### PSEUDASTHENA, Moore.

*Pseudasthena cinerea*. (Plate CXXXVI. fig. 13.)

General aspect of a small *Cyclophora* : wings grey, the outer half of secondaries white, with a grey lunulated submarginal stripe ; all the wings with black-edged yellow discocellular spots, and two irregular more or less macular black-dotted yellow stripes ; the outer stripe bounded above the middle by a blackish spot ; a marginal series of conical black spots ; fringe yellow at base, followed by a grey stripe ; outer half of fringe white spotted with grey : primaries with an additional black-dotted yellow stripe across the basal third : thorax grey, face brown, antennæ and vertex white ; abdomen silver-grey, with yellowish-white claspers. Primaries below shining grey, discal bands and discoidal spot darker, but ill-defined : secondaries silvery white, striated with grey ; discocellular spot and a discal angular stripe dark grey ; marginal spots almost obliterated : palpi ochreous ; pectus white, venter sordid white. Expanse of wings 16–18 millim.

Dharmasala.

#### IDÆA, Treit.

*Idæa cerussina*. (Plate CXXXVI. fig. 14.)

Superficially somewhat resembling *I. flicata*, but allied to *I. contiguaria* : dull white, the markings very similar to those of *I. contiguaria*, but of a slightly more golden-brown colour, the lines of the central area and a small patch at the end of each cell enclosing the discocellular black spot ochraceous ; the discocellular spots larger and blacker ; the basal half of costal border of primaries and a costal spot just beyond the cell sooty black : face black, vertex of head white ; collar and shoulders more or less brown ; abdomen brownish, with white margins to the segments. Primaries below silvery greyish, the base of costa darker grey ; marginal blackish dashes visible in certain lights ; fringe white : secondaries, legs, and venter sericeous sordid white ; pectus greyish. Expanse of wings 16–21 millim.

Dharmasala ; on walls.

***Idæa lacernigera.*** (Plate CXXXVI. fig. 15.)

Primaries silvery white, faintly tinted with tawny; basal sixth dark grey, irrorated and bordered with black; three nearly equidistant grey costal spots, black upon the costal margin, the third almost black throughout, the second forming the commencement of a slightly irregular central brownish band, and the third of a similar discal band which is only separated from a broad brownish external border by an interrupted series of white spots; fringe with ochreous basal half, a central black line and white tips; black discocellular spots: secondaries silvery white, the external third grey; fringe paler than in the primaries; black discocellular spots: thorax dark grey, irrorated with black; face and a patch at the base of each antenna white; palpi and antennæ whitish, black-speckled. Under surface silvery white: primaries with indications of the upper surface markings; three white spots of the submarginal series towards apex bounded on both sides by black dots: secondaries with similar spots; two abbreviated series of blackish spots from abdominal margin beyond the middle: body below smoky grey with plumbaginous anal claspers. Expanse of wings 16 millim.

Dharmasala.

***Idæa insuavis.*** (Plate CXXXVI. fig. 16.)

♀. Sericeous whity brown, irrorated with greyish. The primaries crossed by three pale stripes only visible in certain lights, the first from cell to inner margin across basal third; the second from costal vein to inner margin beyond the middle, angulated on the second median interspace; the third submarginal, unequally trisinuated, the shortest sinuation at the posterior extremity; a slender imperfect dark grey marginal line; fringe pale at the base and between the veins: secondaries without the innermost stripe, but otherwise similar to the primaries: head, excepting the vertex, red-brown; collar crossed by a brown stripe. Under surface silvery greyish white; costal borders of wings and legs slightly tinted with golden buff: primaries showing indications of the stripes of the upper surface. Expanse of wings 22 millim.

Dharmasala.

One specimen of this very distinct but obscurely marked species stood in Mr. Hocking's collection with the series of *I. holosericeata*.

**CRASPEDIA, Hübn.*****Craspedia insolata.*** (Plate CXXXVI. fig. 17.)

Closely allied to *C. paludata* of Europe: much smaller; wings more glossy white; the external area wider, with more angular inner edge, and enclosing a black patch near external angle; a second smaller black subapical spot: secondaries with a wavy dark brown line

across the basal fourth; external area much narrower than in *C. paludata*, the submarginal pale brownish stripe almost wholly obliterated; fringe uniformly white; markings on the under surface barely indicated. Expanse of wings 21–22 millim.

Dharmsala; at sugar in August and September.

It is just possible that Felder's figure of his "*Acidalia pedilata*" may be intended to represent this species; but as there is no description, and both drawing and colouring are perfectly unlike *C. insolata* when examined in detail, it is impossible to assume that such is the case: in some respects it is more like *C. ligataria*.

#### RHODOSTROPHIA, Hübn.

The genus *Phyletis*, Guen., proves to be synonymous with *Rhodostrophia*; when denuded wings of *R. vibicaria* are compared with those of species of *Phyletis*, the neuration is seen to be essentially the same; the antennal and other characters are also identical.

##### *Rhodostrophia stigmatica*. (Plate CXXXVI. figs. 19, 20.)

Nearly allied to *R. vibicaria*; of the same colours: the innermost rose-red line forming a single angle on the primaries and continued across the secondaries; the discocellular red litura replaced by conspicuous black spots; the second line slightly sinuous instead of straight, narrower than in *R. vibicaria*; the submarginal line much more wavy; the marginal line thicker and darker, the costa of primaries more widely red; the fringes rose-red to the base, with dark central and terminal stripes. Under surface yellower, less irrorated with red; the two discal lines formed as above, but much darker; the base of the fringes ochreous; discocellular spots as above. Expanse of wings 30 millim.

Dharmsala.

The females of *R. stigmatica* have a faded appearance, all the rose-red markings being replaced by brown; the species appears to be common, but about half of Mr. Hocking's examples were worn and faded, owing perhaps to the species having been long on the wing when he came across it.

##### *Rhodostrophia tristrigalis*. (Plate CXXXVII. fig. 1.)

♂. Pale testaceous; primaries and thorax above slightly duller in colouring; wings crossed before the end of the discoidal cells by an oblique rose-red line, and beyond the cells by a band of the same colour, sharply defined internally, but diffused externally, a rose-red line halfway between the latter and the outer margin; fringe rose-red, with the base and outer edge pale testaceous; discocellular dots black and rose-red; face red-brown. Under surface suffused with reddish, especially on the veins; blackish discocellular dots, and two deep red parallel discal stripes, outer margin blackish; fringes shining, greyer than above; palpi rosy; legs streaked with pink. Expanse of wings 27 millim.



♀. Larger: the stripes on the wings almost wholly greyish brown instead of rose-red; the discocellular spots indistinct. The under surface paler and much less suffused with red; the stripes below are nevertheless almost as red as in the male. Expanse of wings 30 millim. Dharmasala.

**Rhodostrophia rara.** (Plate CXXXVII. fig. 2.)

♂. Primaries ochreous; an abbreviated dusky stripe at basal third from inner margin; a black discocellular dot; a dull rosy discal band with dark inner edge; a submarginal series of dusky <-shaped markings; a dark red-brown marginal line; fringe shining cupreous brown, with a dark leaden-grey central stripe: secondaries creamy ochreous, whitish towards base; a black discocellular dot; a double rosy-brown band represented by two parallel stripes beyond the cell; a submarginal series of rosy-brown dashes, and a marginal series of darker brown dashes; fringe paler than in primaries: body creamy ochraceous, with slightly darker bands; face red-brown; antennæ pale golden with testaceous pectinations. Wings below shining golden ochraceous, with purplish discocellular lituræ; a darker bordered rosy band beyond the middle, a submarginal series of rose-red <-shaped markings, and a marginal series of dashes of the same colour; fringes shining rosy lilacine, traversed by a dark grey stripe and with yellow basal line; front of pectus deep ochreous. Expanse of wings 29 millim.

Dharmasala.

Of this very distinct species Mr. Hocking only obtained one male, which he included in his series of *R. stigmatica*.

CABERIDÆ.

**HYDATA, Walk.\***

**Hydata amplipennis.** (Plate CXXXVI. fig. 18.)

♂. Very similar in form to that sex of *H. subfenestraria*, the primaries having the inner border expanded so as to cover a great part of the costal half of the secondaries, as in the *Euplæinæ* among the Rhopalocera; the antennæ, however, are less distinctly pectinated than in the New-World species; very pale buff, the wings, excepting towards the middle, irrorated with purplish brown, a slender dark brown marginal line, interrupted at the extremities of the nervures; black discocellular dashes. Primaries crossed just beyond the basal third by an indistinct straight brown line; an irregularly undulated dark brown line near the outer

\* This genus may be placed next to *Stegania*.

margin : secondaries with two parallel sinuous abbreviated brown lines from abdominal margin to centre of wing ; fringe pale yellow : vertex of head and antennæ white, remainder of head and collar brownish. Under surface paler, the lines on the primaries abbreviated, not reaching the inner margin ; those on the secondaries continued to the costa. Expanse of wings 19 millim.

Dharmasala.

Only a single male of this remarkable little insect was obtained.

### MACARIIDÆ.

#### *EILICRINIA*, *Hüb.*

*Eilicrinia signigera*. (Plate CXXXVII. fig. 3.)

Nearly allied to *E. cordiaria*, var. *animaria* : the colouring above more ochraceous ; the lines across the wings not undulated, greyer and wider, the "reniform" spot on the primaries narrower, browner, and transverse ; the apical crescent narrower and browner. On the under surface the wings are much more ochreous ; the cell of primaries densely irrorated with blackish ; the discocellular spots linear ; the undulated discal line continued across both wings and greyish ; the apical crescent on the primaries confined to the fringe. Expanse of wings 35 millim.

Kúlú.

Evidently a rare species.

### FIDONIIDÆ.

#### *ASPILATES*, *Treit.*

*Aspilates hastigera*. (Plate CXXXVII. figs. 4, 5.)

Primaries above sericeous, stramineous, sparsely irrorated with black ; base of costal margin black ; three unequal black dashes on the veins at basal third ; a triangular black spot in the posterior angle of the cell ; an unequally angulated oblique brown band, enclosing eight hastate black spots across the disc ; outer border brown, bounded internally by nine more or less hastate black spots ; paler externally, and enclosing eight marginal black dots ; fringe clear silky stramineous : secondaries creamy white, irrorated with grey, more especially towards the outer margin ; a black dot at the end of the cell and seven at outer margin ; fringe yellowish : body stramineous, the abdomen paler than the thorax. Primaries sordid cream-coloured, greyish towards the base, and irrorated with black on outer half ; costa and fringe stramineous ; a discal grey band, and a darker submarginal band, both bi-angulated in

the middle, and brownish towards costa, in certain lights showing the black spots of the upper surface; a marginal series of black dots: secondaries cream-coloured, rather densely irrorated with brown and with a submarginal series of squamose brown lunules; discocellular and marginal black dots; fringe slightly yellowish, traversed by a grey line: pectus and legs dull stramineous; venter cream-coloured. Expanse of wings 41 millim.

“Láká, above Dharmsala, 11,000 feet; came to light in the tent, June.”

Only one example of this very distinct species was obtained; we have a second specimen from Afghanistan in which the primaries are of a golden-ochreous colour, with less defined bands and smaller black spots, and the secondaries of a purer white, with pale yellow fringe. The species comes nearest to *A. obliquaria*, which varies in a similar manner.

## ZERENIDÆ.

### ICTERODES, *Butl.*

*Icterodes conspersa.* (Plate CXXXVII. fig. 6.)

Allied to *I. sordida*; differing in its more uniformly silver-grey primaries, the blackish spots on which are more or less confluent; the “reniform” patch forming part of the central belt; it also differs from *I. sordida*, *transectata*, and *fraterna* in having the pale bands dotted over with more or less numerous black spots; the basal two fifths of the secondaries grey and the central series of blackish spots less curved. Expanse of wings 52 millim.

Dharmsala.

Two damaged specimens and fragments of a third were all that Mr. Hocking’s collection contained of this interesting species.

### MICRABRAXAS, gen. nov.

Nearest to *Abraxas tenebrosaria*; but the antennæ formed as in the genus *Nelcynda*; instead of being pectinated or ciliated, they are flattened and tapering.

*Micrabraxas punctigera.* (Plate CXXXVII. fig. 7.)

General aspect and size of *Larentia kollariaria*, but in pattern more like *Abraxas tenebrosaria*: primaries grey, clouded with brownish, shot with pale brassy yellow, densely irrorated with black and grey and traversed by five series of black spots, the last two series formed of white-edged conical spots; the fourth series interrupted, the fifth continuous and marginal; three black spots at the end of the cell; fringe grey, with basal and central zigzag yellow lines: secondaries slightly sericeous, creamy white mottled with brownish grey; a



marginal series of more or less lunate black spots; fringe stramineous, with a central grey line: body sericeous greyish brown, the thorax slightly yellowish. Under surface sericeous, cream-coloured, mottled with smoky grey and with a discal series of larger smoky-grey black-centred spots on the veins; blackish discocellular spots; fringes rather yellower than above; costa of primaries yellowish; basimedian area suffused with sericeous brownish grey: body below whitish. Expanse of wings 39 millim.

♂. Dharmsala.

Looked at casually this species might be mistaken for a *Pseudocoremia*; structurally, however, it is closely allied to *Abraxas*, with which the pattern of its wings agrees far more closely.

## LARENTIIDÆ.

### LARENTIA, Dup.

*Larentia granitalis*. (Plate CXXXVII. fig. 8.)

Nearly allied to *L. aptata* of Europe: smaller, the central band of primaries browner, its inner edge regularly crenulated, its outer edge with only one, instead of two well-defined angles; the basal area suffused with brownish; a double dusky subapical costal spot; the two more central submarginal black spots hastate instead of oval; the outer border not grey: the secondaries crossed at basal third by an angular grey line and the body much more dusky in colouring. Expanse of wings 24 millim.

Dharmsala; at sugar in June.

Only one example was obtained.

### EUPITHECIA, Curt.

• *Eupithecia fulvipennis*. (Plate CXXXVII. fig. 9.)

Closely allied to *E. subfulvata* of Europe; but the primaries less produced, less distinctly marked, less grey, and consequently more completely fulvous; the lines across the wings less oblique and the submarginal zigzag white line replaced by a series of small white spots. Expanse of wings 20-23 millim.

Dharmsala.

Three females only were in the collection.

*Eupithecia atrisignis*. (Plate CXXXVII. fig. 10.)

Nearest to *E. lariciata* of Europe: silvery whitish, the primaries with faint lilacine gloss; markings, with the exception of a large oval black discocellular spot, greyish brown; a line

across the basal fifth angulated within the cell and arched below it; oval costal and subcostal spots, continued by a straight transverse stripe to inner margin immediately beyond the subbasal line; two faintly indicated central lines enclosing the discocellular spot; a discal stripe formed almost exactly as in *E. lariciata* and followed by a feebly indicated slender line across the disc and an interrupted submarginal stripe; a very slender interrupted marginal blackish line; fringe traversed by a brown stripe: secondaries with the costal third sericeous white; seven brownish, more or less angulated stripes, abbreviated on basal half, the basal one and the sixth linear, the seventh with zigzag outer edge; margin and fringe as in the primaries; a dark brown discocellular spot: body greyish brown. Under surface silvery greyish white: markings ill-defined. Expanse of wings 22 millim.

Dharmasala.

***Eupithecia lucigera.*** (Plate CXXXVII. fig. 11.)

Apparently nearest to *E. irriguata* of Europe: primaries lilacine grey; a broad sordid white longitudinal sinuous band commencing below the costa at base of inner margin and passing through the cell to the centre of the disc and then upwards to the costal margin, so as to enclose a semicircular costal patch, at the bottom of which is a large black discocellular spot; five or six ill-defined parallel dusky lines across the wing, slightly interrupting the white band; a slender black marginal line interrupted at the extremities of the veins and followed by a slender whitish line at the base of the fringe; a white spot near external angle: secondaries silver-grey, traversed by about six slightly darker stripes: meso- and metathorax whitish; remainder of body above blackish. Under surface silver greyish; markings very ill-defined. Expanse of wings 21 millim.

Dharmasala.

***Eupithecia hockingii.*** (Plate CXXXVII. fig. 12.)

Aspect of *E. centaureata*: primaries sericeous, sordid white, irrorated with greyish brown; basal sixth greyish brown edged with black; an undulated ill-defined greyish-brown line across the basal third; central band narrow; the costal extremity broader, unequally quadrate, dark brown; posterior extremity pale brown; lines of the band double, the outer lines brown and ill-defined, the inner ones black, the lines forming the inner edge of the band angulated, those of the outer edge angulated towards costa, undulated from third median branch to inner margin; a narrower ill-defined irregular band, commencing in a blackish quadrate costal spot, halfway between the central band and the outer margin; outer border greyish brown, the interval between it and the discal band occupied towards apex and external angle by one or two black-bordered white spots; fringe spotted with grey and traversed by a blackish line: secondaries shining white, the female with a blackish dot at the anterior angle of the discoidal cell and an imperfect series of grey lunules; external border very pale greyish,

enclosing four or five white spots: thorax greyish, blackish at the sides and with a black band behind; abdomen white. Under surface silver-grey; markings indistinct. Expanse of wings 20–21 millim.

Dharmasala; at sugar in October.

A series of examples was obtained, but all more or less worn.

### LOBOPHORA, *Curt.*

*Lobophora rufinotata.* (Plate CXXXVII. fig 13.)

♀. Primaries white, irrorated with pale greenish grey and crossed by numerous zigzag parallel lines of the same colour; an angular subbasal black line emitting spurs on the veins, central band represented by two or three ill-defined forked interrupted undulated black lines; two irregularly undulated black parallel submarginal lines; external area traversed by two reversed undulated greenish-grey lines, enclosing four central brick-red rounded spots; a black marginal line; fringe sprinkled with black scales: secondaries sericeous white, with two parallel greyish lines near the outer margin; a blackish marginal line; fringe with greyish outer edge: body sordid pale buff varied with grey. Under surface pearly white; markings of primaries indicated by greyish bands, secondaries with only one grey line; legs banded with grey. Expanse of wings 41 millim.

Kúlú, 9000 feet; on wall of house; October.

### THERA, *Steph.*

*Thera consimilis.* (Plate CXXXVII. fig. 14.)

*Thera consimilis*, Warren, *Proc. Zool. Soc.* 1888, p. 326. n. 146.

Nearly allied to *T. juniperata* of Europe; of the same colours; considerably larger; the subbasal black line more acutely angulated in the male, in the female unequal, zigzag, and shaded internally so as to form an ill-defined subbasal band; the postmedian band edged internally from costa to median vein by a straight oblique black line, the corresponding outer edge of the band is also oblique and much more regular; the lower portion of the band is narrower in the male and partly divided into contiguous spots, but in the female it is wider, the lowest division is blackened and its inner edge is very oblique; the whole of the markings on the external area are more strongly defined and the grey line on the secondaries is undulated: the under surface of the secondaries is white. Expanse of wings, ♂ 32 millim., ♀ 38 millim.

♂, Dharmasala (*Hocking*); ♀, Afghanistan in September (*Capt. A. Fortescue*); ♂ ♀, Thundiani and Nandar (*Major Yerbury*).



**MELANIPPE, Dup.**

This genus is characterized as having the antennæ of both sexes simple ; nevertheless not a few forms having pectinated or ciliated antennæ in the male have been erroneously added to the genus.

**Melanippe minuta.** (Plate CXXXVII. figs. 15, 16.)

Nearest to *M. rivata* of Europe : very similar in pattern, nearly one third smaller, sericeous, more or less suffused with grey ; the basal fourth of the costa of primaries occupied by an irregular white-edged dark brown patch ; the subbasal transverse undulated lines of *M. rivata* either wanting or only partially indicated by two or three black spots towards costa and a tapering streak from inner margin ; the central belt usually well-defined, but in some females with diffused inner edge ; the lines on the disc usually better defined and denticulated ; the subapical costal dark brown spot continued to apex, but divided in the centre by the submarginal white line ; two well-defined dark brown spots on the outer margin, bounded internally by the submarginal line ; the broken black marginal line better marked ; the fringe broader, its inner half blackish, its outer half grey, with basal and postmedian white lines ; and with apical and central white spots : secondaries grey, crossed beyond the middle by white-edged darker bands ; marginal line and fringe similar to those of the primaries, but without the white spots : palpi black, tipped with white ; head white ; collar brown, with two small central white spots ; thorax white, crossed in front by a dark brown stripe ; abdomen grey, with more or less defined darker transverse bands. Under surface grey ; wings sericeous, with black discocellular spots as above ; an angular, partly blackish-edged white discal line, an undulated submarginal series of white spots ; a slender broken marginal blackish line, followed by a whitish line at the base of the fringe ; legs bone-whitish. Expanse of wings 19–20 millim.

Dharmasala.

**Melanippe despicienda.** (Plate CXXXVII. fig. 17.)

Fuliginous brown, primaries darker than secondaries ; the central band formed as in *M. intermediata*, grey with black margins and bounded by a grey-edged white line ; a similarly edged grey basal patch followed by two dark grey or blackish irregular lines ; an oblique discocellular black dash within the central band followed by a short bisinuated grey-brown line from the costa to the second median branch ; two undulated parallel dusky lines beyond the central band and a similarly formed white submarginal line ; a slender black marginal line interrupted at the end of each vein ; fringe whitish tipped with grey and traversed by a grey stripe : secondaries whitish towards base and costa, dusky towards outer margin,

traversed by seven or eight darker lines, the central one and sometimes one or two of the others blackish. Under surface whitish, shining; the wings with black discocellular dashes followed by an angulated black-dotted dusky stripe, two discal stripes and the outer margin grey; fringe and marginal line as above: primaries with costal and subcostal blackish dashes towards the base. Expanse of wings 24–28 millim.

Dharmasala.

#### COREMIA, Guén.

*Coremia divergens*. (Plate CXXXVII. fig. 18.)

Nearest to *C. propugnata* of Europe: smaller; the primaries grey, varied with whitish-cinereous transverse undulated lines; the central belt much broader than in *C. propugnata*, less irregular, bordered inside by a black stripe excepting on the lower half of its outer edge, where it is only represented by a dark grey and whitish line; the two black lines on the belt of the European species are absent in *C. divergens*; the basal area is bounded externally by a blackish band in place of the two lines on *C. propugnata*; there is a dark patch on the external area just above the middle, but the lines across this area are not blackish at the costa: the secondaries only show one angular grey line halfway between the cell and the outer margin; on the under surface, however, there are three parallel lines. The under surface is sericeous whitish, the primaries somewhat greyish; the markings indistinct. Expanse of wings 22 millim.

Dharmasala; at sugar in August.

#### SCOTOSIA, Steph.

*Scotosia indistincta*. (Plate CXXXVII. fig. 19.)

♀. Primaries above sericeous, dull silvery grey; markings, excepting the black subbasal line, the black spots and dashes on the veins, and the triangular marginal spots, indistinct from the median vein downwards; the pattern somewhat resembles that of *S. sabaudiata* of Europe, but the lines of the central belt are placed nearer to the base and there are two dark subapical spots, one on the costa, the other near the outer margin, on the radial interspaces: secondaries paler silver-grey, almost white on the costa; an abbreviated darker wavy line from the centre of the abdominal margin to the cell; two continuous parallel lines beyond the middle; anal angle occupied by a whitish patch crossed by two dark grey bisinuated lines; the remainder of the external border broadly grey, slightly darker than the ground-colour; a marginal series of black lunules; fringe creamy whitish, tipped with grey and regularly spotted with blackish; vertex of head and metathorax white; abdomen brown, barred with white. Under surface shining silver-grey, crossed beyond the middle by three

or four ill-defined darker irregular lines, scarcely perceptible on the primaries; black disco-cellular dashes and marginal lunules: pectus white; legs banded with grey; venter dark grey, banded with white. Expanse of wings 36 millim.

Dharmasala.

This species is represented by one perfect and one imperfect specimen; it is not very nearly allied to any species in the Museum series, indeed its general aspect is rather that of a *Gnophos* than a *Scotosia*.

#### CIDARIA, *Treit.*

*Cidaria nivicineta.* (Plate CXXXVII. fig. 20.)

Allied to *C. substituta*, altogether darker, more purplish; the inner white edging of the central belt forming a long spur upon the first median branch instead of an obtuse angle on the median vein; the two middle black lines of the central belt wider apart; the outer white edge of the central belt with its lowest indentation below the first median branch instead of upon it; the line following it and the veins cupreous red instead of ochreous; the inner edge of the black-brown patch on outer margin almost regularly convex instead of zigzag: the secondaries suffused, excepting on the costa, with purplish grey: body with all the darker portions deep bronze-brown instead of paler brown or testaceous. Under surface similar to *C. substituta*, but slightly greyer. Expanse of wings 36 millim.

Dharmasala.

*Cidaria multistriata.* (Plate CXXXVII. fig. 21.)

Allied to *C. complicata*: the triangular patch of the ground-colour following the three subbasal white lines extended forwards and backwards so as to form a band; the fifth and sixth lines diverging from the cell to the costa; the blackish reniform spot bordered with white followed by a broad angular dark brown central band, the upper half of which only is present in the Japanese species; the seventh white line bounding this band more slender, less angular, followed by an additional pale line; the eighth and ninth lines closely approximated, only separated by a tremulous black line; the tenth line acutely dentate-sinuate, widely separated from the ninth but coalescing with the eleventh, so as to leave an apical patch of yellowish olivaceous, and a large dark brown irregularly triangular patch near outer margin; a marginal series of more or less confluent white-edged black spots; fringe white, traversed by a central grey stripe: secondaries with the abbreviated white lines nearer to the outer margin and partly zigzag; margin and fringe as in the primaries. Expanse of wings 24 millim.

Dharmasala; at sugar from July to October.

This species and *C. complicata* have rather long palpi for the genus, but hardly seem sufficiently distinct to require the erection of a separate genus for their reception.



## DESCRIPTIONS OF LARVÆ.

The following larvæ have been selected for illustration, from the large series preserved by Mr. Hocking, chiefly on account of their not having been previously figured.

## ARCTIIDÆ.

*Alpenus multiguttatus.* (Plate CXXXVIII. fig. 9.)

Larva green: head dull orange, mouth-parts bordered with black; each segment with a greyish dorsal patch heavily mottled with black, divided by a central longitudinal green line and widely interrupted by a transverse oblong shield covered with reddish-orange woolly tufts emitting stiff divergent black hairs; the third and fourth segments with a subdorsal longitudinal black dash, forming part of the subdorsal stripe, which is otherwise pale yellow, and encloses a series of small reddish warts emitting three or four black hairs; spiracles small, transverse oval, pale yellow edged with black; one or two small orange warts emitting black and white hairs either in front or behind each spiracle; subspiracular stripe pale yellow; a ventral series of pale orange warts, bearing numerous silky white hairs, just above the legs; legs tipped with shining reddish brown. Length of preserved larva 42 millim.

“Dharmasala, 7000 feet. Food-plant unknown.”

*Andala unifascia.* (Plate CXXXVIII. fig. 11.)

Larva deep purplish brown, paler between the segments: head shining black, the face and mouth-parts mahogany-reddish; a cream-coloured longitudinal dorsal line running from between the eyes to near the middle of the third segment, the back part of it almost divided into three spots; from this point to the front of the eleventh segment it is represented by two unequal cream-coloured spots, the larger one at the back and the smaller at the front of each segment; a similar series of spots along each side; spiracles very small, blackish edged with yellowish; every segment encircled by a zigzag series of nine to twelve small black tubercles bearing tufts of stiff radiating dirty-white hairs; prolegs and claspers mahogany-brown. Length of preserved larva 35–39 millim.

Kangra district; 12th May, 1879.

No note as to the food-plant accompanies the larvæ, and therefore it would appear to have been unknown to Mr. Hocking.

**Spilarctia lacteata.** (Plate CXXXVIII. fig. 2.)

Larva dull black, mottled with velvet-black ; purplish between the segments : head orange-chestnut ; spiracles transverse, elliptical, cream-white ; the second, third, and fourth segments with two, and the remaining segments with four, dorsal warts arranged in the form of a trapezium and bearing long black and short radiating white hairs, the anterior tubercles of the third and fourth segments also with a very long central white hair ; the posterior tubercles of the eleventh, and all the tubercles of the twelfth and thirteenth, segments with bright ferruginous hairs ; two lateral series of tubercles bearing radiating white hairs ; prolegs and claspers mahogany-red. Length of preserved larva 35–45 millim.

Dharmsala ; 20th April, 1878.

No note as to the food-plant. The perfect insect was not in the collection ; it was probably sent off for identification when reared.

**Thyrgorina dorsalis.** (Plate CXXXVIII. fig. 4.)

Larva with the dorsal region vinous brown varied with paler striæ ; a central longitudinal interrupted cream-whitish stripe, the third and fourth segments with four, and the remaining segments with two, shining purple dorsal tubercles bearing black hairs : head bright mahogany-red, blackish in front ; sides cream-coloured, obliquely striated on each segment with purplish-brown speckles ; the second segment with a black subdorsal and a yellow tubercle ; the third and fourth with two, and the remaining segments with four, yellow tubercles bearing white hairs ; spiracles extremely small, white ; ventral surface cream-coloured, the anterior segments with a central blackish dot ; legs and claspers amber-yellow. Length of preserved larva 27 millim.

Dharmsala ; “ July 1884 ; on cherry at 6200 feet, gregarious.”

**Seirarctia quadriramosa.** (Plate CXXXVIII. fig. 1.)

Larva smoky brown with a velvety-greyish sheen : head and legs shining piceous ; spiracles small and black ; the segments encircled by eight black tubercles bearing numerous shining mahogany-red spine-like radiating bristles. Length of preserved larva 57 millim.

Dharmsala ; 4th March, 1878.

**Rajendra pannosa.** (Plate CXXXVIII. fig. 8.)

Larva dark brown : head shining blackish ; lower half of eyes reddish ; a well-defined longitudinal dorsal stripe and a double lateral stripe cream-coloured ; a slender subdorsal pale brown line ; each segment with three shining tubercles, bearing short radiating black

bristles, upon the dark brown subdorsal area, and three lateral reddish tubercles bearing white hairs and forming a zigzag series with the subdorsal tubercles; ventral surface cream-coloured; legs pale shining chestnut-red. Length of preserved larva 29 millim.

Dharmsala; 13th November, 1878.

***Hypercompa principalis.*** (Plate CXXXVIII. fig. 3.)

Larva black: head shining, base of antennæ and mouth-parts whitish; tubercles and bristles upon them similar to those of the preceding species; a narrow orange and yellow dorsal stripe, whitish between the segments; a mottled white lateral stripe, and below it an irregular whitish band composed of partly confluent transverse striæ; legs shining amber-yellowish. Length of preserved larva 52 millim.

Dharmsala; March 6th: on plantain.

LIPARIDÆ.

***Chærotricha vitellina.*** (Plate CXXXVIII. fig. 13.)

Larva dull black: head shining, piceous at the back; an imperfect dorsal series of white dots and a few scattered white lateral dots; each segment encircled by eight woolly foxy-red tubercles emitting whitish hairs; tubercles small and inconspicuous, as on the two preceding species; legs dull shining amber-yellowish. Length of preserved larva 37–47 millim.

Dharmsala, 4000–7000 feet; on *Lotus corniculatus*.

***Chærotricha plana.*** (Plate CXXXVIII. fig. 5.)

Larva dull black, covered with irregular yellowish-edged red striæ: head bright shining red; each segment encircled by eight red tubercles, but those of the four dorsal series almost concealed by testaceous wool, and emitting short woolly whitish hairs; those of the lateral series dotted with small oval pearl-white processes and emitting white hairs; the dorsal series on the second, third, and fourth segments less woolly and dotted with white processes similar to those of the lateral series; the two central series elongated on the fifth, sixth, and twelfth segments; spiracles inconspicuous; legs shining red. Length of preserved larva 46–60 millim.

Kangra valley; May, 4000 feet.

The moth is said to have been found about the base of the "Papul tree" (*Ficus religiosa*) in June.



*Artaxa scintillans.* (Plate CXXXVIII. fig. 10.)

Larva, anterior segments greyish brown, middle and posterior segments blackish flecked with yellow: head shining blackish or brown, with the mouth-parts yellow; second segment with the anterior half yellow, and with two large subdorsal scarlet tubercles bearing long grey hairs and small carmine lateral tubercles bearing short white hairs; a trapezoidal transverse yellow dorsal patch on the fourth segment, traversed by a series of small subconfluent carmine tubercles which extends downwards to a lateral yellow stripe which extends to the last segment, and is regularly interrupted by conspicuous scarlet tubercles bearing white hairs; the third segment with grey-brown tubercles, the fifth and sixth segments woolly, prominent, brown, with long hairs, and encircled by a yellow line; the dorsal tubercles on the remaining segments much less prominent, blacker, and separated by a broad double longitudinal yellow band; the subdorsal tubercles on the fifth and following segments black edged with yellow, the first two with one, and the succeeding series with two, white spots, which give them the appearance of raised ocelli; below the lateral yellow stripe is a broad greyish band mottled with yellow and interrupted behind the claspers by an oblong blackish spot on each segment; ventral surface occupied by an irregular yellow band spotted down the middle with grey; anal segment banded in front with yellow, encircled by a series of small carmine tubercles bearing grey hairs; legs shining amber-yellowish. Length of preserved larva 30 millim.

Dharmasala; 6200 feet, in June: on wild barberry.

*Charnidas exclamationis.* (Plate CXXXVIII. fig. 6.)

Larva blackish: head pale buff; two dorsal stripes of contiguous yellow and red spots interrupted on each segment by a whitish-brown spot or tubercle bearing long hairs, on the fifth to eighth segments these tubercles are very large, prominent, and woolly, and bear long hairs; those on the thirteenth segment are not prominent, but bear long tapering pencils of hair; the tenth and eleventh segments bear a small central dorsal carmine tubercle; an imperfect rose-pink stripe bearing tubercles of the same colour emitting pale brown hairs; a broad lateral rose-pink band, on and below which are small tubercles bearing white hairs; ventral surface yellow, streaked in front and at the sides with black; legs shining vermilion-red. Length of preserved larva 28 millim.

Dharmasala; March 1879: food-plant unknown.

*Parorgyia dalbergiæ.* (Plate CXXXVIII. fig. 12.)

Larva pale smoky brown: head shining chestnut-red, labrum yellow; each segment encircled by brown tubercles bearing long hairs; the second segment with six arranged in the form of a triangle on each side, the anterior of the three tubercles bearing a long curved

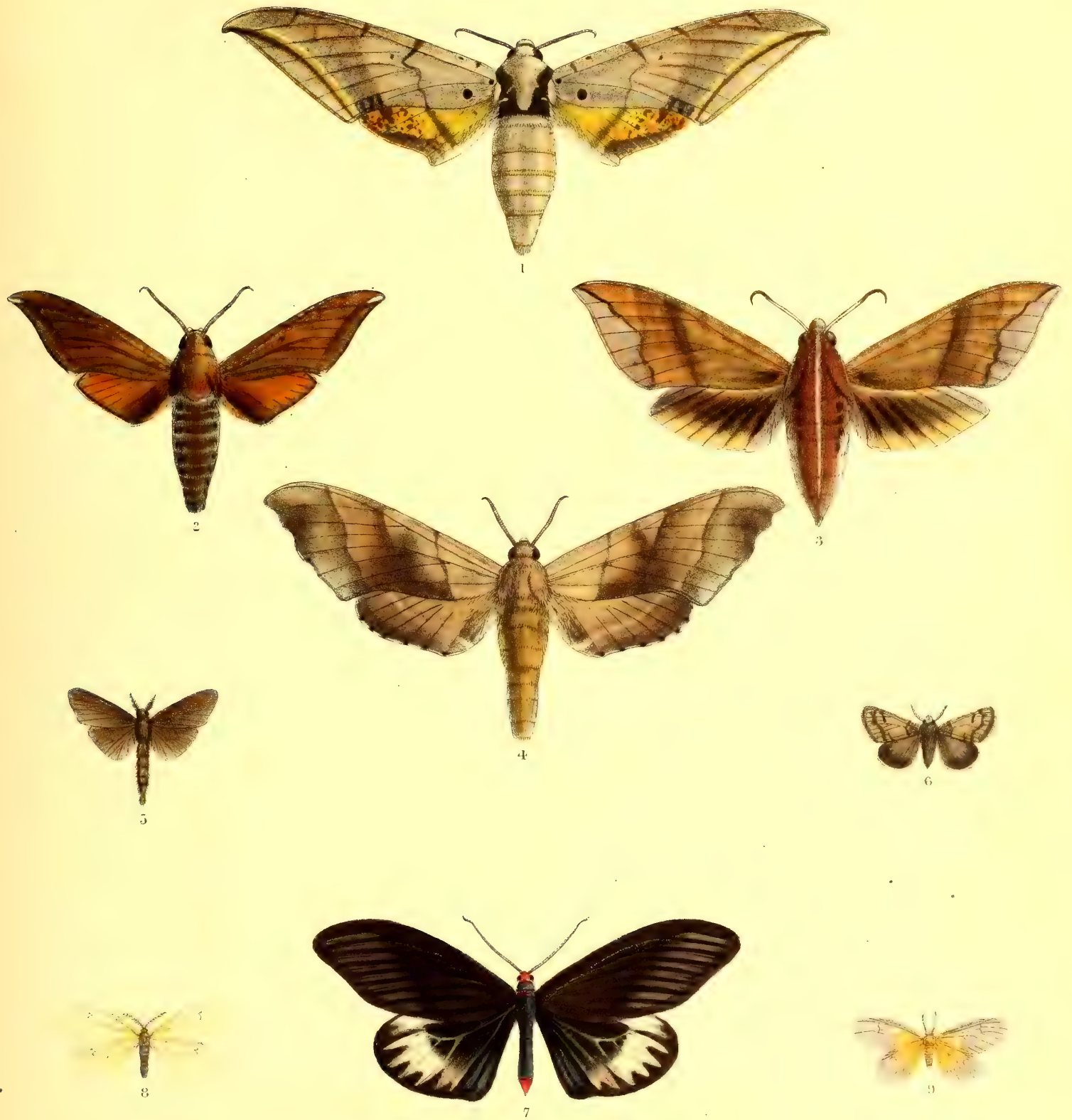
pencil of hairs as in *Orgyia*; the third and fourth segments with eight tubercles, all small, and emitting radiating hairs; the remaining segments with ten tubercles, the dorsal pair of which on the fifth to eighth segments emit dense brush-like tufts of hairs as in *Orgyia*; the tenth and eleventh segments have a small hard central dorsal reddish tubercle without hairs: the tubercles of the last segment bear long curved hairs directed backwards; between the fourth and fifth segments are two irregular whitish mottled patches; legs and claspers shining chestnut-reddish, shading into blackish. Length of preserved larva 41-51 millim.

Kangra valley; 3000 feet, May 1st: on Sissoo (*Dalbergia sissoo*).

***Dasychira kausalia*.** (Plate CXXXVIII. fig. 7.)

Larva yellowish buff, slightly tinted with greenish between the segments: head slightly shining, mouth-parts shining amber and black; second segment with six and remaining segments with ten small tubercles, bearing long straight lemon-yellow hairs; the dorsal tubercles of the fifth to eighth segments bearing dense confluent pencils of long hair; a broad oblong-ovate black silky transverse patch between the fifth and sixth segments; the eleventh segment slightly orange on the dorsal region; the dorsal tubercles of the twelfth segment bearing very long weak pencils of hair directed slightly backwards; legs shining chestnut-red. Length of preserved larva 60 millim.

Kangra district; June 20th, 1878: on rose and willow at 6200 feet.



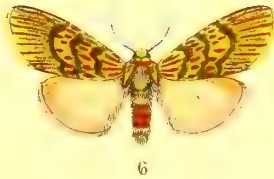
R. Minerva del. et lith.

Minerva Bros. lit.

- |                                 |                                   |                                   |
|---------------------------------|-----------------------------------|-----------------------------------|
| 1 <i>Ambulyx pacida</i> .       | 4 <i>Polypterus trilineatus</i> . | 7 <i>Gynaecopterus n. det.</i>    |
| 2 <i>Ambulyx rubescens</i> .    | 5 <i>Mahasena hockingii</i> .     | 8 <i>E. rana carneola</i> .       |
| 3 <i>Ampulophaga fasciata</i> . | 6 <i>Lachana lachanaria</i> .     | 9 <i>Agonotropa ussuriensis</i> . |



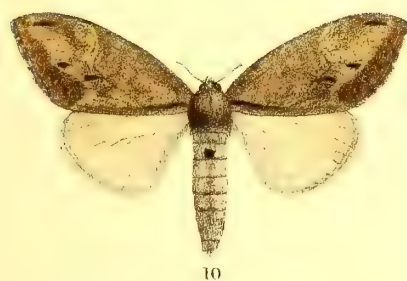
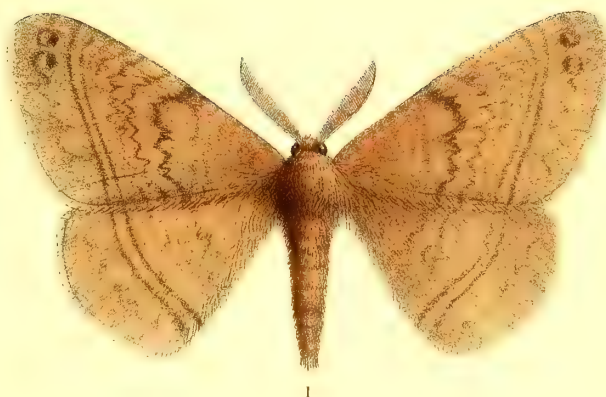
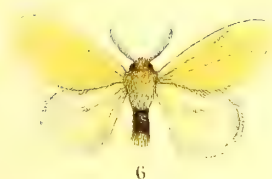




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|----------------------------|--------------------------|-----------------------|
| 1. Diphtera fasciata       | 6. Mitochrista pretiosa  | 11. Æmene inconspicua |
| 2. Spilarctia dalbergæ     | 7. 8. Setina dasara      | 12. Æmene sordidiora  |
| 3. Spilarctia howgus       | 9. Challa quadrimaculata | 13. Callinola scripta |
| 4. 5. Thyrgorina dorsalis. | 10. Simareea lurida      | 14. Lebena argentea   |







R. Minter del. et lith.

Minter Bros. Chromo.

1. *Eupterote fraterna*.  
2,3. *Lymantria nigra*.  
4,5. *Euproctis abdominalis*.

6,7. *Chærotriche sulphurescens*.  
8. *Charnidas umbrina*.  
9-11. *Parorgyia dalbergiæ*.





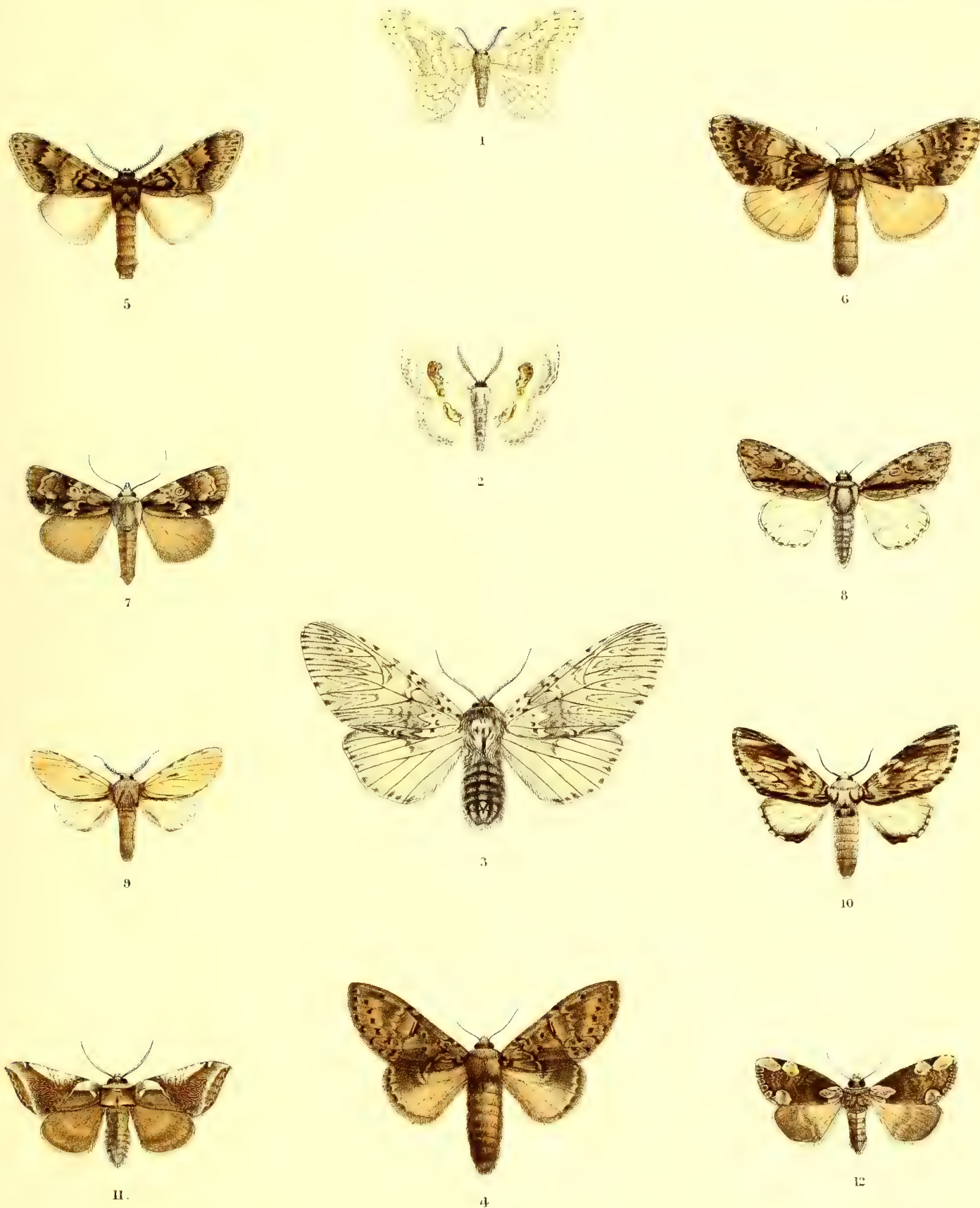
R. Minter del et lith.

Minter Bros. Chromo

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|---------------------------|-----------------------|
| 1. Taragama castanoptera. | 6. Aphenda.           |
| 2,3. Saturnia hockingii.  | 7. Agnidra violacea.  |
| 4. Parasa hockingii.      | 8. Drepana lilacina.  |
| 5. Cania sulfusa.         | 9. Drepana simillima. |







R. Mintern del. et lith.

Mintern Bros. Chromo

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|----------------------------------|----------------------------------|----------------------------------|
| 1. <i>Peridrepana hyalina</i> .  | 4. <i>Stauropus berberisæ</i> .  | 9, 10. <i>Pheosia fasciata</i> . |
| 2. <i>Problepsis vulgaris</i> .  | 5, 6. <i>Peridea basistiga</i> . | 11. <i>Habrosyne fraterna</i> .  |
| 3. <i>Dicranura himalayana</i> . | 7. <i>Hyboma divisa</i> .        | 12. <i>Thyatira cognata</i> .    |
|                                  | 8. <i>Triæna denticulata</i> .   |                                  |







F.W. Frohawk del et lith.

Mintern Bros. Chromo

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|-----------------------------------|--------------------------------------|-----------------------------------|
| 1. <i>Hyboma umbrifera</i> .      | 5. <i>Tympanistes rubidorsalis</i> . | 10, 11. <i>Leucania percisa</i> . |
| 2. <i>Polyploca orbicularis</i> . | 6. <i>Aletia exanthemata</i> .       | 12. <i>Leucania irrorata</i> .    |
| 3. <i>Polyploca albidisca</i> .   | 7, 8. <i>Aletia rudis</i> .          | 13. <i>Leucania bifasciata</i> .  |
| 4. <i>Polyploca renalis</i> .     | 9. <i>Aletia fraterna</i> .          |                                   |





F. W. Frohawk del et lith.

Mintern Bros. Chrome

1, 2. *Xylophasia repetita*.  
3. *Neuria auripicta*.  
4. *Triphæna fuscicollis*.

5. *Tiracola violacea*.  
6, 7. *Triphænosis inepta*.  
8, 9. *Triphænosis diminuta*.  
10. *Mamestra terranea*.

11. *Charesia rufipennis*.  
12. *Anchoelis tenuis*.  
13. *Cosmia albipennis*.







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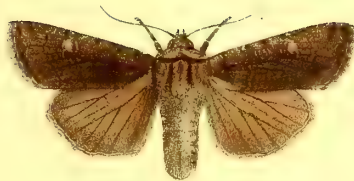
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4



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11



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F. W. Frohman del. et lith.

Mintern Bros. imp.

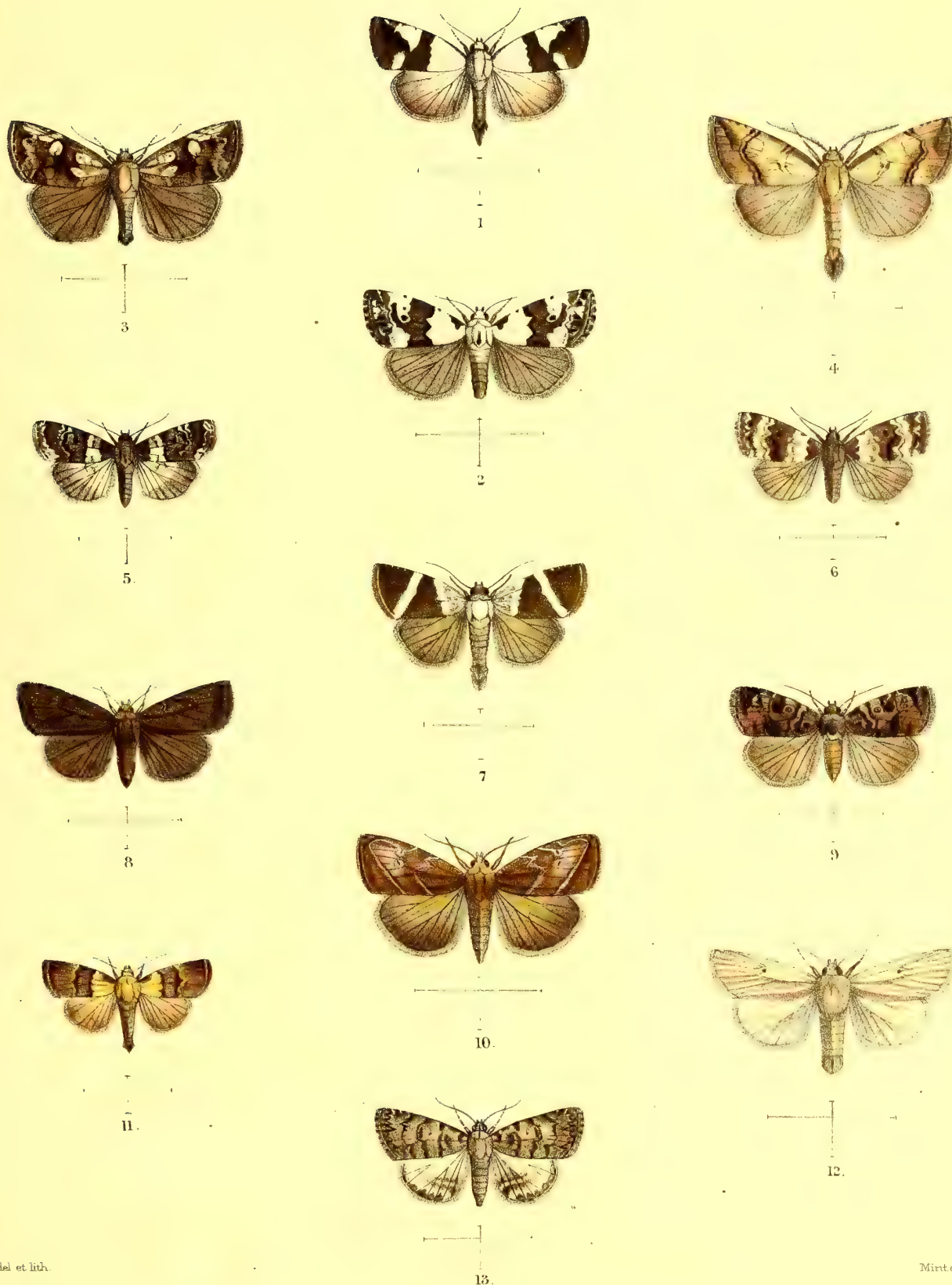
1. *Semiotheca orthosoides*.  
2. *Dianthæcia nivescens*.  
3. *Trisuloides cœrulea*.

4. *Canna splendens*.  
5. *Epunda mamestrina*.  
6. *Eurabilla lignea*.  
7. *Xestia melonina*.

8. *Karana similis*.  
9. *Hadena lubrica*.  
10, 11. *Spælotis ambigua*.





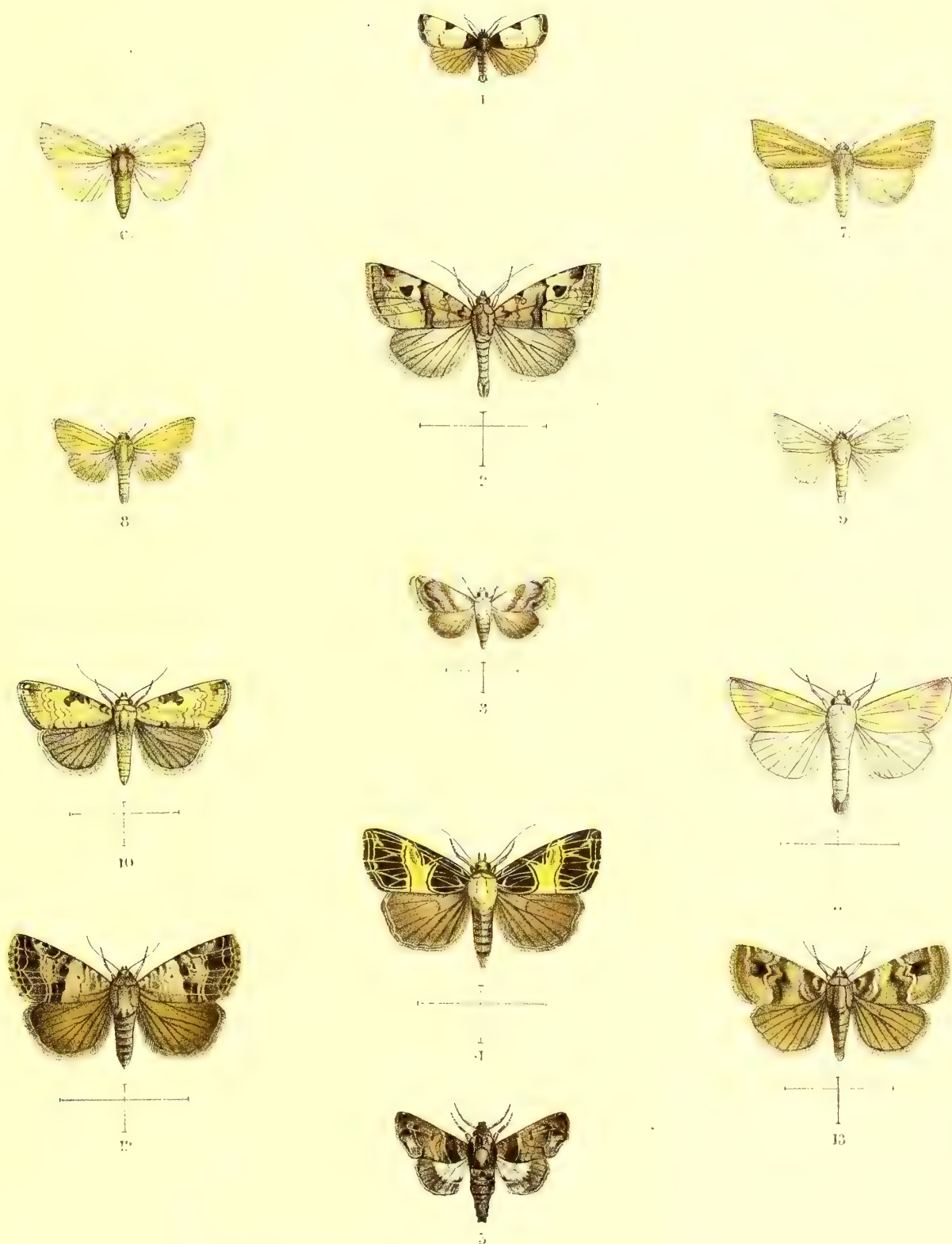


F W Frohawk del et lith.

Mintern Bros. imp

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|------------------------------|---------------------------------|------------------------------------|
| 1. <i>Acontia tegulata</i> . | 5, 6. <i>Acontia excisa</i> .   | 10. <i>Hydrelia opalescens</i> .   |
| 2. <i>Acontia picata</i> .   | 7. <i>Bankia obliqua</i> .      | 11. <i>Anthophila trilatalis</i> . |
| 3. <i>Acontia plebeia</i> .  | 8. <i>Hydrelia auripalpis</i> . | 12. <i>Pradatta bimaculata</i> .   |
| 4. <i>Acontia plumbata</i> . | 9. <i>Erastria unduligera</i> . | 13. <i>Leptosia contingens</i> .   |





F.W. Frohawk del. et lith.

Mintern Bros. Chromo

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|-------------------------------|---------------------------|-------------------------|
| 1. Thalpochares argentifrons. | 5. Pericillaria maculata. | 9. Curubasa cruentata   |
| 2. Thalpochares hypenoides.   | 6. Pradatta beatrix.      | 10. Hiccodes dosaroides |
| 3. Thalpochares roseana.      | 7. Masalia tosta.         | 11. Pradatta decorata   |
| 4. Callopistria minuta        | 8. Pradatta artaxoides.   | 12. Ozarba verata       |
|                               | 13. Ozarba incondita      |                         |







5.



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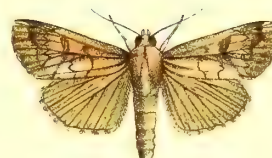
6.



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3.



13.

1. *Eliochroa*

2. *Anomis*

3. *Anomis instabilis*

4. *Anomis*

5. *Eliochroa*

6, 8. *Eliochroa curtisalis*

13. *Hypocla*

11. *Anomis*

12. *Anomis*

13. *Anomis*







F. W. Frohawk del. et lith.

Mintern Bros. Chromo

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|------------------------------------|---------------------------------|
| 1. <i>Panilla apicalis</i> .       | 5. <i>Trigonodes conigera</i> . |
| 2, 3. <i>Catocala inconstans</i> . | 6-8. <i>Spirama confusa</i> .   |
| 4. <i>Catocala distorta</i> .      | 9, 10. <i>Spirama rosacea</i> . |





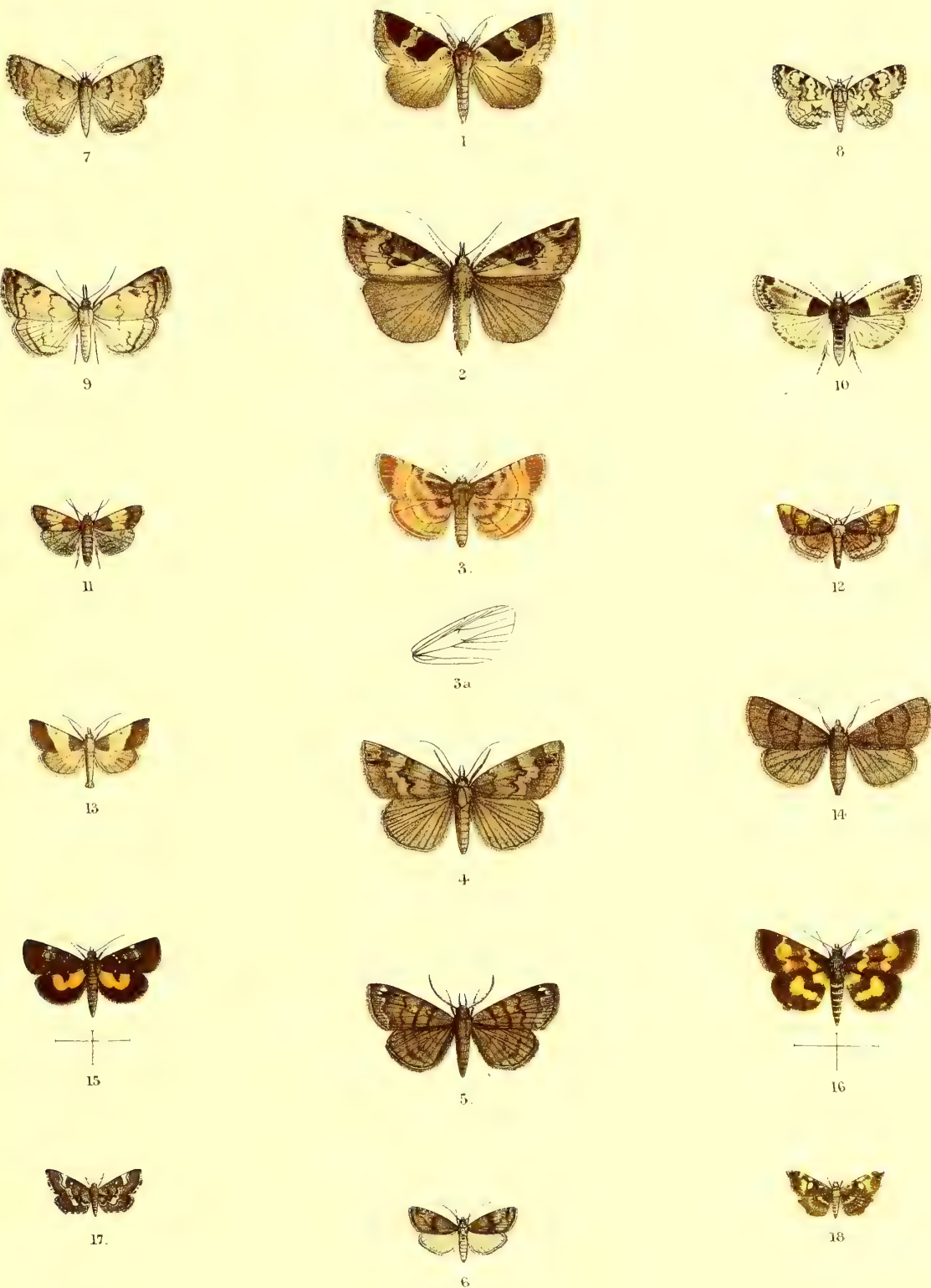
R. Minter del et lith

Minter Bros. Chromo

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|--------------------------------|--------------------------------------|-----------------------------------|
| 1. <i>Euclidia captata</i> .   | 6, 7. <i>Gathynia simulans</i> .     | 13. <i>Rhynchina uniformis</i> .  |
| 2. <i>Raparna undulata</i> .   | 8. <i>Orudiza columbaris</i> .       | 14. <i>Rhynchina rivuligera</i> . |
| 3. <i>Raparna angusta</i> .    | 9. <i>Rhynchina plusioides</i> .     | 15. <i>Rhynchina angustata</i> .  |
| 4. <i>Daxata glaucescens</i> . | 10, 11. <i>Rhynchina sagittata</i> . | 16. <i>Hypena crassipalpis</i> .  |
| 5. <i>Daxata lilacina</i> .    | 12. <i>Rhynchina cœrulescens</i> .   | 17. <i>Hypena veronica</i> .      |







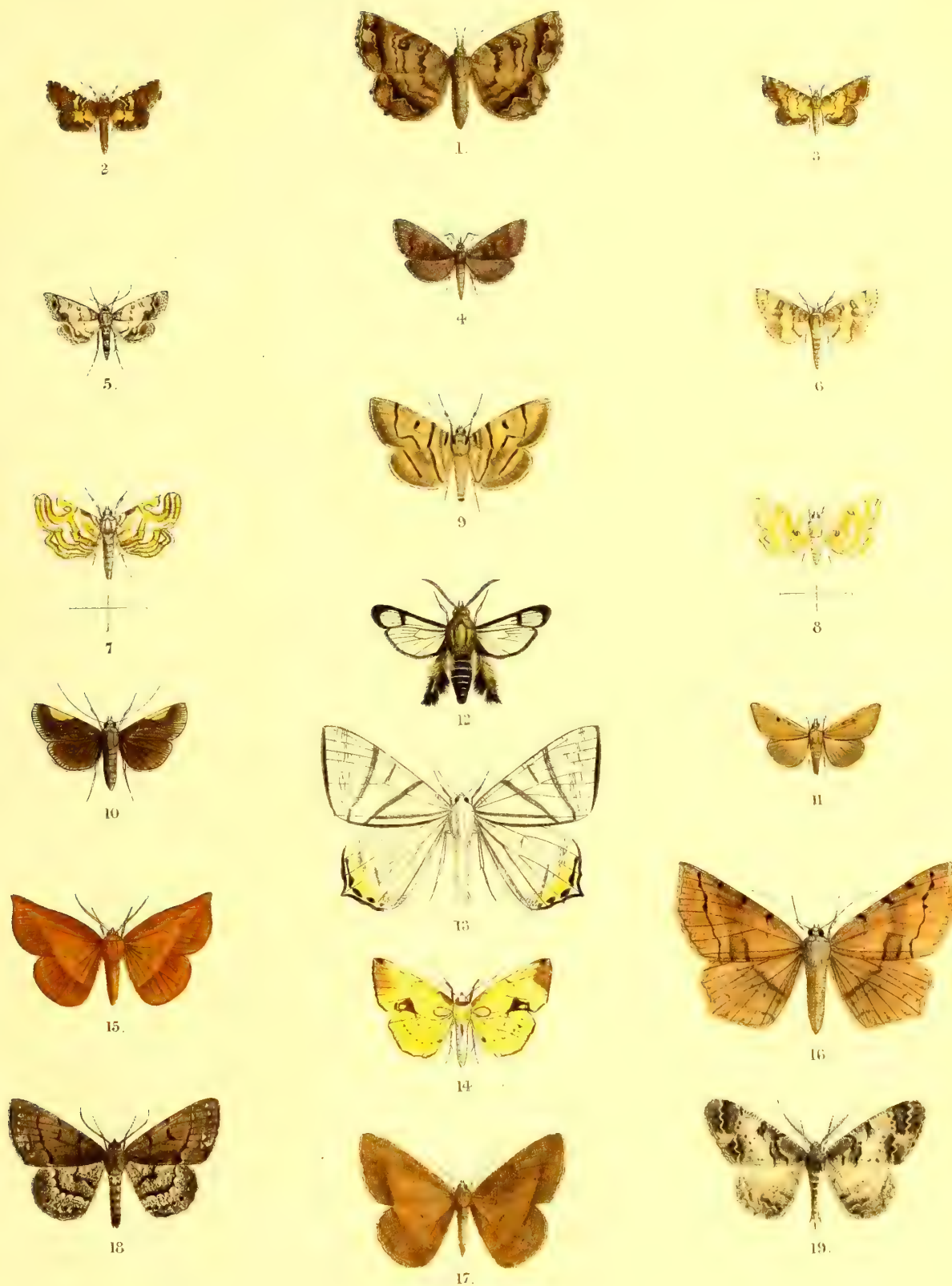
F.W. Frohawk del et lith.

Mintern Bros. Chromo

- |                                     |                                    |                                 |
|-------------------------------------|------------------------------------|---------------------------------|
| 1. <i>Hypena biplagiata</i>         | 7. <i>Epizeuxis saccharivora</i> . | 13. <i>Euclita dharmasalæ</i>   |
| 2. <i>Hypena urticicola</i>         | 8. <i>Epizeuxis maculifera</i> .   | 14. <i>Euclita fortis</i>       |
| 3. <i>Belonepholis striata</i> .    | 9. <i>Herminia palumbina</i> .     | 15. <i>Heliothela pusilla</i>   |
| 4. <i>Bleptina dubia</i> .          | 10. <i>Pyralis marmorca</i> .      | 16. <i>Porphyritis maculata</i> |
| 5. <i>Pseudaglossa fulvipicta</i> . | 11. <i>Pyralis fumipennis</i> .    | 17. <i>Danaga picata</i>        |
| 6. <i>Pseudaglossa atrata</i> .     | 12. <i>Pyralis princeps</i> .      | 18. <i>Cindaphia tricolor</i>   |

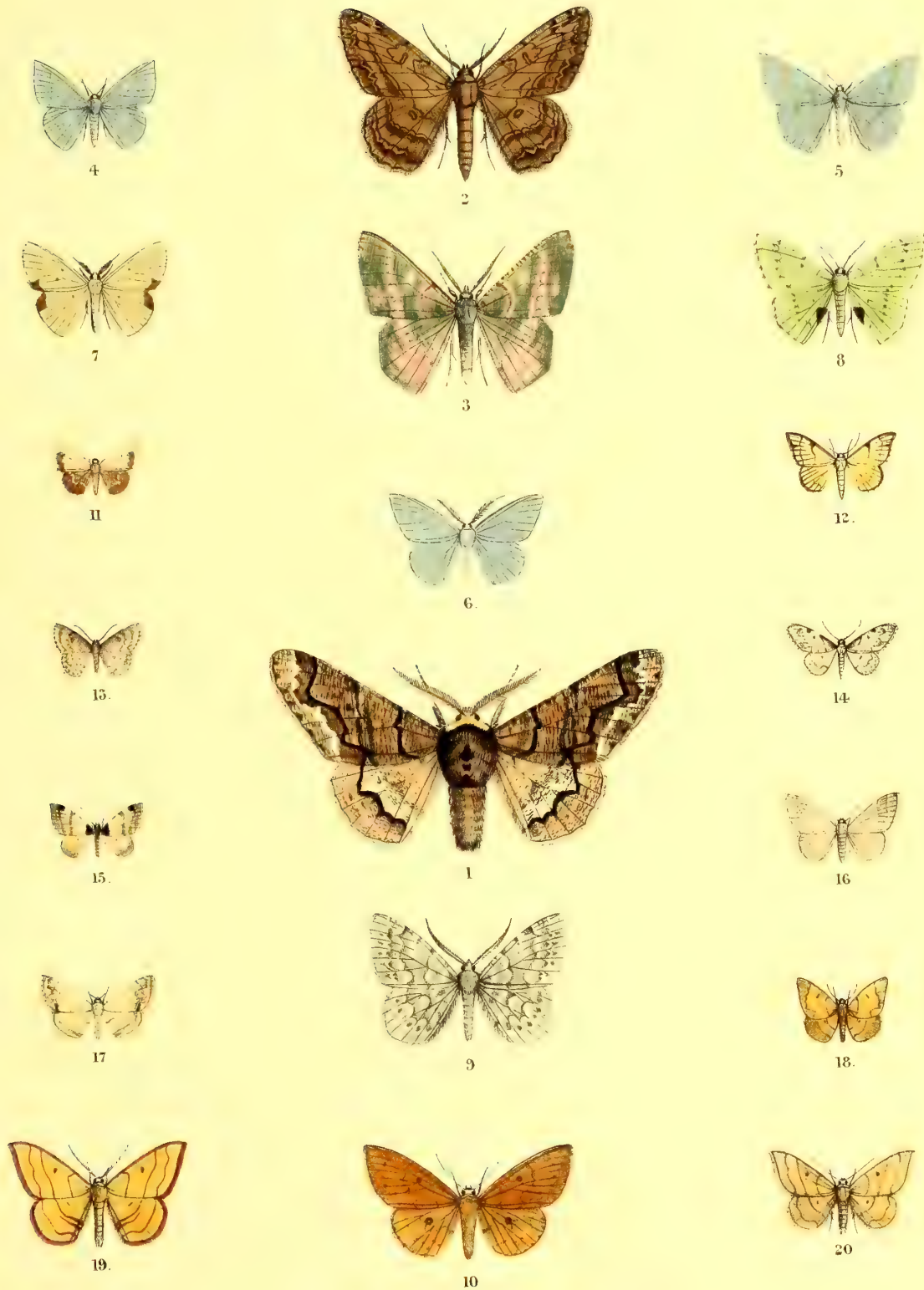






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|------------------------------------|---------------------------------|------------------------------------|
| 1. <i>Egnasia cinerea</i> .        | 8. <i>Olgostigma dives</i>      | 14. <i>Corymica vitrigera</i>      |
| 2, 3. <i>Danaa biformis</i> .      | 9. <i>Haritala definita</i>     | 15. <i>Pseudomiza argillacea</i> . |
| 4. <i>Diploptyla longipalpis</i> . | 10. <i>Heterocnephys venosa</i> | 16. <i>Tetracis indica</i>         |
| 5. <i>Thysanodesma major</i> .     | 11. <i>Scopula bisignata</i> .  | 17. <i>Hypephyra terrosa</i> .     |
| 6. <i>Gadessa ossea</i>            | 12. <i>Melittia kulluana</i>    | 18. <i>Abaciscus tristis</i> .     |
| 7. <i>Olgostigma locuples</i> .    | 13. <i>Urapteryx excellens</i>  | 19. <i>Alcis sublimis</i> .        |





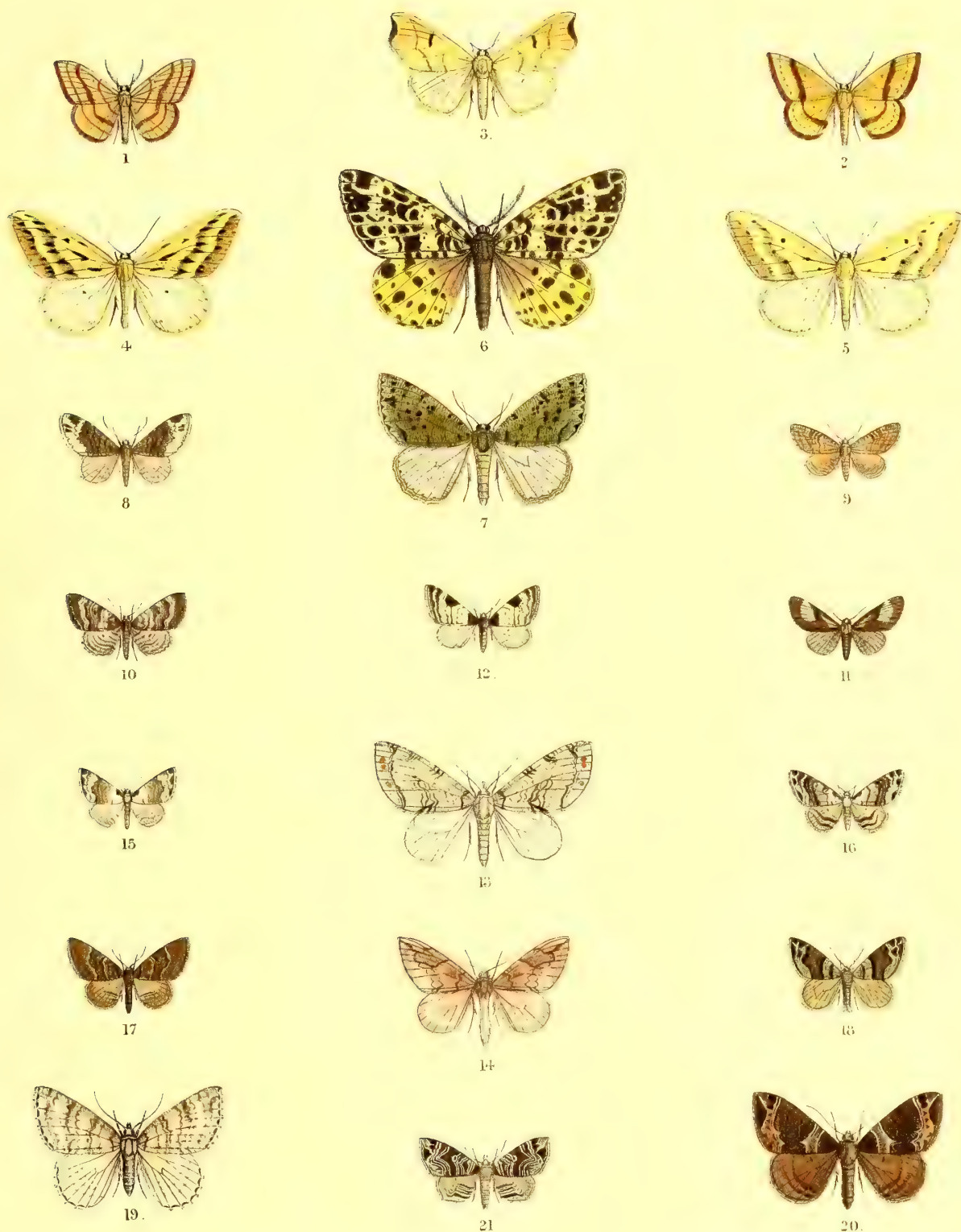
F. W. Hochawke del. et lith.

Mintern Bros. imp.

- |   |                                   |                                   |
|---|-----------------------------------|-----------------------------------|
| 1. <i>Amphidasys porphyrea</i> .          | 7. <i>Comibæna quadrinotata</i> . | 13. <i>Pseudasthena cinerea</i> . |
| 2. <i>Chogada latipennis</i> .            | 8. <i>Racheospila strix</i> .     | 14. <i>Idæa cerussina</i> .       |
| 3. <i>Loxochila variegata</i> .           | 9. <i>Chlororithra fea</i> .      | 15. <i>Idæa lacernigera</i> .     |
| 4. <i>Nemoria gracilis</i> .              | 10. <i>Anisodes annulifera</i> .  | 16. <i>Idæa insuavis</i> .        |
| 5. <i>Nemoria gelida</i> .                | 11. <i>Eois lacteipennis</i> .    | 17. <i>Craspedia insolata</i> .   |
| 6. <i>Thalassodes unduligera</i> .        | 12. <i>Eois protensa</i> .        | 18. <i>Hydata amphipennis</i> .   |
| 19, 20. <i>Rhodostrophia stigmatica</i> . |                                   |                                   |







F.W. Frohawk del. et lith.

Antenna. F. ... mp.

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|--------------------------------------|-----------------------------------|-----------------------------------|
| 1. <i>Rhodostrophia tristrigalis</i> | 8. <i>Larentia granitalis</i> .   | 14. <i>Thera consimilis</i> .     |
| 2. <i>Rhodostrophia rara</i> .       | 9. <i>Eupithecia fulvipennis</i>  | 15, 16. <i>Melanippe minuta</i>   |
| 3. <i>Eilicrinia signigera</i>       | 10. <i>Eupithecia atrisignus</i>  | 17. <i>Melanippe despicenda</i> . |
| 4, 5. <i>Aspilates hastigera</i>     | 11. <i>Eupithecia lucigera</i>    | 18. <i>Coremia divinator</i> .    |
| 6. <i>Icterodes conspersa</i> .      | 12. <i>Eupithecia hockingii</i> . | 19. <i>Scotosia indistincta</i> . |
| 7. <i>Microbraxas punctigera</i>     | 13. <i>Lobophora rufinotata</i>   | 20. <i>Cidaria nivincta</i>       |
|                                      | 21. <i>Cidaria multistrigata</i>  |                                   |







R. Mintern del. et lith.

Mintern Bros. imp.

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|-------------------------------------|-------------------------------------|----------------------------------|
| 1. <i>Seirarctia quadriramosa</i> . | 5. <i>Chærotricha plana</i> .       | 9. <i>Alpenus multiguttatus</i>  |
| 2. <i>Spilarctia lacteata</i> .     | 6. <i>Charnidas exclamationis</i> . | 10. <i>Artaxa scintillans</i>    |
| 3. <i>Hypercompa principalis</i> .  | 7. <i>Dasychira kausalia</i> .      | 11. <i>Andala unifascia</i> .    |
| 4. <i>Thyrgorina dorsalis</i> .     | 8. <i>Rajendra pannosa</i> .        | 12. <i>Parorgyia dalbergiæ</i> . |
|                                     | 13. <i>Chærotricha vitellina</i> .  |                                  |





















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